

# American Gas *Association* MONTHLY

Natural Gas Steps Up Defense

•

Guide to Emergency Conduct

•

Gas Helps America Keep House

•

Gas Liquefaction and Storage

•

Engineers Ready for the Test

*June*



1941

VOLUME XXIII NUMBER 6

# APRIL PRIZE CONTEST WINNERS



## DIVISION I

- J. Landman** 1st Prize—\$25.00  
Union Furniture Co., San Francisco, Cal.  
**A. Sammann** 2nd Prize—\$20.00  
Lachman Brothers, San Francisco, Cal.  
**E. J. Peacock** 3rd Prize—\$15.00  
Sterling Furniture Co., San Francisco, Cal.  
**H. C. Spaulding** 4th Prize—\$10.00  
Sterling Furniture Co., San Francisco, Cal.  
**O. Parrett** 5th Prize—\$10.00  
Redlick Newman Co., San Francisco, Cal.  
**L. K. Ward** 6th Prize—\$5.00  
Eagle Rock Appliance Co., Los Angeles, Cal.  
**E. E. Whelan** 7th Prize—\$5.00  
The Emporium, San Francisco, Cal.  
**R. Gould** 8th Prize—\$5.00  
The May Co., Los Angeles, Cal.

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## DIVISION II

- Wm. Collins** 1st Prize—\$25.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**E. C. Benckert** 2nd Prize—\$20.00  
Public Serv. Elec. & Gas Co., Burlington, N. J.  
**L. Fee** 3rd Prize—\$15.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**H. Dossinger** 4th Prize—\$10.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**G. Washington** 5th Prize—\$10.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**G. Glover** 6th Prize—\$5.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**J. Funk** 7th Prize—\$5.00  
Iroquois Gas Corp., Buffalo, N. Y.  
**W. Dawursk** 8th Prize—\$5.00  
Milwaukee Gas Lt. Co., Milwaukee, Wis.

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## DIVISION III

- S. Haist** 1st Prize—\$25.00  
Parmelee-Dohrmann Co., San Diego, Cal.  
**W. J. Pender** 2nd Prize—\$20.00  
Elizabethtown Cons. Gas Co., Elizabeth, N. J.  
**S. Williams** 3rd Prize—\$15.00  
Parmelee-Dohrmann Co., San Diego, Cal.  
**H. Greenwood** 4th Prize—\$10.00  
Michigan Cons. Gas Co., Grand Rapids, Mich.  
**G. Stoltenberg** 5th Prize—\$10.00  
Parmelee-Dohrmann Co., San Diego, Cal.  
**C. E. Williams** 6th Prize—\$5.00  
Michigan Cons. Gas Co., Grand Rapids, Mich.  
**T. C. Massey** 7th Prize—\$5.00  
Elizabethtown Cons. Gas Co., Elizabeth, N. J.  
**R. C. Borne** 8th Prize—\$5.00  
Minneapolis Gas Lt. Co., Minneapolis, Minn.

## DIVISION IV

- R. Milligan** 1st Prize—\$25.00  
Jersey Central Pr. & Lt. Co., Long Branch, N. J.  
**Mrs. E. Moffett** 2nd Prize—\$20.00  
Jersey Central Pr. & Lt. Co., Asbury Park, N. J.  
**G. H. Porter** 3rd Prize—\$15.00  
The Bridgeport Gas Lt. Co., Bridgeport, Conn.  
**Miss D. L. Sterling** 4th Prize—\$10.00  
Jersey Central Pr. & Lt. Co., Belmar, N. J.  
**J. J. Stanley** 5th Prize—\$10.00  
Central Indiana Gas Co., Marion, Ind.  
**J. G. Hogan** 6th Prize—\$5.00  
Jersey Central Pr. & Lt. Co., Dover, N. J.  
**G. Shultz** 7th Prize—\$5.00  
Central Indiana Gas Co., Muncie, Ind.  
**R. J. Leller** 8th Prize—\$5.00  
Central Indiana Gas Co., Marion, Ind.

## DIVISION V

- W. Dezelle** 1st Prize—\$25.00  
Peoples Gas Co., Port Arthur, Tex.  
**P. J. Brown** 2nd Prize—\$20.00  
Mobile Gas Service Corp., Mobile, Ala.  
**H. A. Moulse** 3rd Prize—\$15.00  
Roanoke Gas Co., Roanoke, Va.  
**W. E. Underwood** 4th Prize—\$10.00  
Mobile Gas Service Corp., Mobile, Ala.  
**H. P. Burgess** 5th Prize—\$10.00  
Roanoke Gas Co., Roanoke, Va.  
**H. J. Bassett** 6th Prize—\$5.00  
Michigan Cons. Gas Co., Muskegon, Mich.  
**H. O'Farrell** 7th Prize—\$5.00  
Washington Gas & Elec. Co., Tacoma, Wash.  
**S. Hewett** 8th Prize—\$5.00  
Mobile Gas Service Corp., Mobile, Ala.

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## DIVISION VI

- J. F. Stewart** 1st Prize—\$25.00  
Alabama Gas Co., Montgomery, Ala.  
**C. R. Hare** 2nd Prize—\$20.00  
Alabama Gas Co., Montgomery, Ala.  
**R. C. Hart** 3rd Prize—\$15.00  
Amere Gas Utilities Co., Beckley, W. Va.  
**E. B. Neeley** 4th Prize—\$10.00  
Alabama Gas Co., Montgomery, Ala.  
**W. B. Gilmer** 5th Prize—\$5.00  
Alabama Gas Co., Montgomery, Ala.  
**A. W. Tidwell** 6th Prize—\$5.00  
Macon Gas Co., Macon, Ga.  
**W. J. Leighton** 7th Prize—\$5.00  
Virginia Gas Dist. Corp., Covington, Va.  
**R. W. Wendell** 8th Prize—\$5.00  
Florida Public Utilities Co., W. Palm Beach, Fla.

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## DIVISION VII

- B. M. Smilie** 1st Prize—\$25.00  
Alabama Gas Co., Anniston, Ala.  
**T. C. Griffin** 2nd Prize—\$20.00  
Alabama Gas Co., Anniston, Ala.  
**E. L. Doster** 3rd Prize—\$15.00  
Alabama Gas Co., Selma, Ala.  
**R. C. Marshall** 4th Prize—\$10.00  
Alabama Natural Gas Corp., Talladega, Ala.  
**J. B. Hays** 5th Prize—\$10.00  
Alabama Natural Gas Corp., Leeds, Ala.

## RANGER CLUB

Utility and dealer salesmen have shared more than \$2,285 so far this year in CP Ranger Club Monthly prizes and cash membership awards. April prize contest winners are listed here.

196 Cash Prizes await winners of May and Quarterly Contests. Hundreds of Cash Membership Awards for CP Range salesmen qualifying in the 1941 Ranger Club. All Contest Reports must be received by the dates listed on the bottom of the Contest Forms.

American Gas  
*Association*  
MONTHLY

C O N T E N T S      F O R      J U N E      1 9 4 1



National defense still has the center of the stage and bids fair to hold it for some time to come if the A. G. A. meetings of last month are any criterion. Both the Natural Gas Convention and the Production and Chemical Conference spotlighted the emergency and the gas man's part in the preparedness program. . . . Keeping the public informed of our actions during the national crisis is one of the primary rules of conduct laid down for the gas industry by President Strickler in his timely address, "Deeds, Then Words." . . . Make no mistake about it, America's housekeeping is Big Business, says Grace L. Pennock of the Ladies Home Journal in a thought-provoking article based on interviews with typical housewives. She contrasts today's gas ranges with the "temperamental" ones of ten years ago. . . . Everyone was interested in the outstanding engineering achievement of 1940—liquefying and storing natural gas—and now John A. Clark gives the first actual data on the performance of the Cleveland plant. . . . Make a noise like a moose if you want to catch a moose; follow similar tactics if you want to keep your customers' goodwill is the essence of an interest-packed article by George Saas.

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DUST BOWL ON ALISO STREET—Prize-winning photograph by A. L. Nemetz, Southern California Gas Co., Los Angeles, showing removal of 30" cast iron pipe to make way for viaduct improvement. After 30 years of service the pipe was in excellent condition.





JAMES M. BEALL, *Editor*

## DALLAS CONVENTION

### .... Natural Gas Industry Organizes for Defense

THE natural gas industry will continue "business as usual" plus discharging to the full all its responsibilities in connection with national defense or any job which may be given it. This statement of D. A. Hulcy, president, Lone Star Gas Company, in welcoming the natural gas convention to Dallas, Texas, set the keynote of one of the largest, most successful meetings yet held by the far-flung natural gas industry. It was a convention marked to an extraordinary degree with the imprint of the times. It recognized that national defense is the Number One problem of the year, but did not lose sight of the fact that the industry's future depends, in the final analysis, on how it serves its day-to-day peacetime customers.

From the time H. D. Hancock, president, Gas Advisers, Inc., and chairman, A. G. A. Natural Gas Section, pounded his gavel to open the first session, May 5, until the close of the three-day meeting, May 7, the 1050 registered delegates were treated to an unending series of meetings and events which were both stimulating and profitable. Faced with a full quota of problems, including increased regulation and more taxation as well as the task of providing fuel for a re-arming nation, there was unmitigated optimism regarding the industry's ability to come through with flying colors.

The record registration was but one sign of the significance attached to this convention. Overflow attendance at many meetings and the serious attention to business reflected the delegates' determination to master their problems. Ample opportunity to gain first-hand operating information was given at the separate conferences which were divided as follows: Transmission, Production, Industrial and Commercial Gas Sales, Residential Gas Sales, Accident Prevention and Accounting. In addition, there were roundtable luncheon meetings devoted to Home Service, Residential Sales, Industrial and Commercial Gas Sales, Technical and

Research Problems, and Accident Prevention and Employee Education.

Sparkling entertainment features which followed the business sessions included a stag Open House, a Fiesta Ball and a special program of events for the visiting ladies. Outstanding showmanship was exhibited in the Cavalcade of Gas presentation directed by E. C. Sorby, George D. Roper Corp., and F. M. Rosenkrans, The Gas Service Co., which was the hit of the convention (see page 226). An unusual innovation was the "branding corral" setup in the lobby of the Adolphus Hotel where the CP gas range insignia was branded in real cowboy fashion by the visiting gas men.

With more than two-thirds of the country's total natural gas production located in Texas and adjacent southwestern states, and five pipe lines radiating from Dallas itself, there was excellent opportunity for the delegates to inspect natural gas operations at the source of supply. Taking advantage of this situation, a party of prominent natural gas executives under the leadership of Thomas B. Gregory, of Pittsburgh, chairman of the board of the Lone Star Gas Company, viewed the Lone Star recycling plants at Grapeland and Opelika, East Texas.

The Committee on Final Resolutions headed by G. J. Neuner, Kansas City, expressed the thanks of the convention to Dallas for its hospitality and to the following convention committee chairmen and their co-workers: D. A. Hulcy, General Arrangements Committee; R. G. Soper, Reception Committee; A. S. Johnson, Entertainment Committee; Will C. Grant, Publicity Committee; J. French Robinson, Program Committee; Z. E. Black, Housing Committee; Mrs. D. A. Hulcy, Ladies Committee, and H. D. Hancock, General Committee.

At the Tuesday meeting, J. French Robinson, president of The East Ohio Gas Company, Cleveland, was nominated



Left—Registration activity during the natural gas convention. Right—J. French Robinson, Cleveland, vice-chairman of the Natural Gas Section (center), poses with Paul R. Taylor, New York, and L. L. Dyer, Dallas, chairman of the Accounting Conference



A sextet of prominent convention leaders. Left to right—C. H. Waring, Kansas City, past chairman, Distribution Committee; D. A. Hulcy, Dallas, chairman, General Arrangements Committee; E. Holly Poe, secretary, Natural Gas Section; C. B. Dushane, Chicago; H. Carl Wolf, chairman, Industrial Gas Section; and Robert M. Poe, Austin, Texas

as the next chairman of the Natural Gas Section, and B. R. Bay, president, Northern Natural Gas Co., Omaha, was named for vice-chairman. The election will take place at the annual A. G. A. convention in Atlantic City, N. J., in October.

In welcoming the delegates to Dallas, Mr. Hulcy said that the natural gas industry in its remarkable history had become accustomed to trials, tribulations and emergencies: "We have been

raised on that sort of thing and this training should stand us in good stead now." He voiced his feeling that the future of the privately owned utilities, to a marked degree, depended upon "how well we do our jobs in connection with the national defense program at this time."

Changed circumstances since the last natural gas convention were reflected throughout the eloquent and moving address of Chairman Hancock who

spoke on "Fundamental Principles under the New Rules." In these days of aggression, Mr. Hancock said, "the millions of gas flames burning in homes and workshops throughout our country might well be regarded as symbols of our determination to retain our freedoms and to add new freedoms. By our meeting together to engage in free discussion of our common problems, we gather strength and inspiration from one another to carry on our task of keeping these flames burning both figuratively and literally."

After presenting a comprehensive review of the industry's impressive progress during the year, Mr. Hancock outlined briefly the growth of regulation during the depression and the problems superimposed by the defense program. While noting that the defense program following closely on the heels of the depression would "inevitably retard our progress towards an improved general economy," he said that the resulting technological and engineering developments which are useful in productive enterprise would assist in recovery from the depression and make a permanent contribution to the national welfare.

#### *Free Economic System Vital*

"The productive enterprises of our country constitute the foundation of both the national defense program and the endeavors to achieve and retain gains in our general economy," Mr. Hancock said. "It is in a freely operating economic system that such enterprises can best provide the means of assuring that our institutions will

Executive and Managing Committee dinner meeting during the convention. Left to right, around the table: Elmer F. Schmidt, Dallas; A. F. Bridge, Los Angeles; H. C. Cooper, Pittsburgh; R. E. Wertz, Amarillo; Walter C. Beckjord, New York, past president, American Gas Association; E. Holly Poe, New York; H. D. Hancock, New

York, chairman, Natural Gas Section; J. French Robinson, Cleveland, vice-chairman, Natural Gas Section; B. R. Bay, Omaha; Thomas J. Strickler, Kansas City, president, American Gas Association; T. B. Gregory, Pittsburgh; Alexander Forward, New York, managing director, American Gas Association



On the roster! At right President Thomas J. Strickler, in a stirring address, advises the natural gas men: "Deeds First, Then Words." Others on the speakers' platform are: E. Holly Poe, H. Carl Wolf, John T. Graves II, Chairman Hancock, Vice-Chairman Robinson, and E. L. Rawlins

Below is Chairman Hancock during the presentation of his timely address on the state of the natural gas industry



withstand all threats from within and without our borders." He warned that "in order to use our resources to the best advantage, productive enterprise should be released from undue regulation and restrictions," but stated that the natural gas industry does not object to equitable governmental regulation "where and when the public interest requires."

After urging the delegates to widen their horizon and appraise many factors not previously recognized as important to the industry, Mr. Hancock concluded: "While the problems confronting the natural gas industry at the time of this thirty-sixth annual meeting are increasing in number, magnitude and complexity, there is determination to seek the best solutions through the hard method of toil and perseverance."

"Deeds First, Then Words" was the forthright title of a timely address by Major Thomas J. Strickler, president of the American Gas Association, and vice-president and general manager, Kansas City Gas Company, which emphasized the importance of keeping the public advised of the gas industry's contributions to national defense. Major Strickler's address is published in full elsewhere in this issue of the MONTHLY.

Challenging the delegates to defend the American system and to recover the spirit of adventure about the system, John Temple Graves II, editor of the *Birmingham Age-Herald*, Birmingham, Ala., said that Number One problem of the world today "wears a small mustache and goes by the name of Adolf Hitler." He pointed out that the adventure of defending and recovering the American system should be relished by the natural gas men because "you have made a public utility of the 'wild spirit' of the universe, have drawn from the earth its own breath, have turned it into the finest flame known to man, have given heat new names and combustion new tricks." Mr. Graves' address, which concluded the first general session, was a highlight of the convention.

#### Fuel Shortage Possible

With J. French Robinson, vice-chairman of the Natural Gas Section, presiding, the second general session opened with a talk by Alexander Forward, managing director, American Gas Association, entitled "Fuel Comments." Pointing out that fuels of all kinds will become scarcer as the national emergency continues, Mr. Forward said that the industry should be prepared for further conservation and regulatory moves. He counseled the industry to heed the lessons of the first World War, which brought scarcity and price rises of raw materials and labor, and to lay the groundwork for rate adjustments if necessary to assure adequate gas service.

An optimistic summary of the gas appliance business, tempered with sug-

gestions for improvement, was presented by Watson E. Derwent, president, Association of Gas Appliance and Equipment Manufacturers, who stated that gas appliance sales this spring are at the highest levels in the nation's history.

Concluding that "we should all be sales optimistic despite the conditions confronting us," Mr. Derwent observed that: "General business is at the highest level in the nation's history; the bulk of the national defense program is still in the blueprint stage; the threat of inflation makes most buyers



Mrs. R. D. Garver, Kansas City; George Garver, Milwaukee; Mrs. Graham Campbell, Kansas City, and Charles D. Greason, Kansas City



J. W. Bradfield, Wichita Falls, Texas; J. C. Hill, Beeville, Texas; R. E. Wagner, San Antonio, Texas, and F. V. Barnett, Monroe



Between sessions. Left to right: Oliver Hagerman, New York; Mr. H. L. Pinkerton, Albuquerque; Harry J. Gobel, Grand Rapids; H. D. and Mrs. H. D. Straight, Grand Rapids; A. S. White, Kansas City; Straight, Grand Rapids, and Bert Sutherland, Pittsburgh

want to be well protected on key raw materials; the purchasing power of the nation's workers is mounting at an increasing rate; decentralization of industry broadens the sales markets; sales of consumer goods will top all previous records before the war is over; building activity is increasing in every section of the country; credit conditions are the best in years, as money flows freely; speculative excesses are few, as witnessed by stock market transactions; inventories are not burdensome, in fact shortages appear in many lines"; etc.—all of which presents a rosy picture for the gas appliance salesman.

Pinch-hitting for R. R. Sayers, director of the U. S. Bureau of Mines, Washington, D. C., R. A. Cattell, chief engineer of the Bureau's petroleum and natural gas division, spoke on "Some Aspects of Health and Safety in the Gas Industry." Mr. Cattell outlined the extensive investigations carried on by the bureau which have resulted in higher standards of safety

and health in the mining and utility industries.

The second general session closed with a detailed review of "Recent Court Decisions and Commission Orders Affecting the Natural Gas Industry" by Roy C. Coffee, general attorney, Lone Star Gas Company, Dallas, Texas.

#### Protection Against Sabotage

Care in selecting personnel is the most effective way of protecting utility property against sabotage, E. C. Wenig, head of the Dallas Federal Bureau of Investigation office, told the delegates attending the Accident Prevention Conference under the chairmanship of W. H. Adams, safety director of The Manufacturers Light & Heat Co., Pittsburgh.

The F. B. I. is limited to checking personnel and other matters to prevent sabotage to certain priority plants listed by the Army and Navy, Mr. Wenig said, but is anxious to receive reports from any industry of any suspicious individuals. "Ninety-five per cent of the suspicions reported to the F. B. I. develop nothing," he said, "yet we feel that if only one out of 100 cases reported turns out to be well founded, our work is well justified."

The natural gas men displayed keen interest in protection against sabotage, making many inquiries of the F. B. I. agent. Mr. Wenig said that in case of sabotage, guards should protect the area in which it occurred until the proper person to investigate arrives. Employees should be trained not to talk too freely to outsiders of plant operations, he said.

W. R. Davis, assistant personnel manager, Southern California Gas Company, Los Angeles, described how his

company seeks to put the right man in the right place by psychological tests. He said that emotional instability is the chief deterrent to employees doing their job, and indicated that in some jobs a person of low IQ will do better work than one of high IQ.

A feature of the accident prevention meeting was a panel discussion on "How To Instill and Maintain a Greater Interest in Accident Prevention." Taking part in this discussion were: James R. D. Eddy, director, Department of Vocational Education, Austin, Texas; C. E. Bennett, president, The Manufacturers Light & Heat Co., Pittsburgh; Ralph Shipp, chief engineer, The Lone Star Gas Co., Petrolia; Floyd Callison, Oklahoma Natural Gas Co., Okmulgee; and J. P. Gibbs, casualty insurance commissioner, Austin. Precautionary measures in preventing fires and explosions in the gas industry were outlined in a paper by G. M. Kintz, district engineer, United States Bureau of Mines, Dallas.



T. B. Gregory, Pittsburgh; D. A. Hulcy, Dallas; R. G. Soper, Dallas; Elmer F. Schmidt, Dallas, and Julian L. Foster, Dallas



Julian L. Foster, Dallas, chairman of the Transmission Conference (center), confers with Elmer F. Schmidt, Dallas, and H. P. Boncher, Bradford





Left to right: R. C. Palmer, Houston; W. R. Porterfield, Lafayette; Prof. F. H. Dotterweich, Texas A. & I. College, Kingsville; I. W. McKee, Kansas City; J. C. Tankow, Detroit; E. R. Myhre, Kansas City; R. M. Scroggins, Shreveport; and T. M. McKenzie, Shreveport

### Transmission and Production Conferences

Getting down to practical operating problems, the Transmission and Production Conferences which occupied a large part of the three-day convention program, brought out a wealth of valuable information. The Transmission Conference was conducted by Julian L. Foster, general superintendent, Lone



R. G. Soper, president, Dallas Gas Company, and C. W. Sears, Pasadena, retired natural gas pioneer

Star Gas Co., Dallas, and chairman, A. G. A. Transmission Committee, and the Production Conference was directed by E. L. Rawlins, Union Producing Co., Shreveport, and chairman, A. G. A. Production Committee.

Opening the transmission conference, J. William Ferguson, technical supervisor, Southern California Gas Co., Los Angeles, described methods of maintaining high pipe line flow efficiency. According to Mr. Ferguson, a pipe line system may be kept clean by the use of dehydrating, desulfurizing, and dust removal plants, or may be periodically cleaned by the use of mechanical scrapers. The problem, he stated, as to whether the line should be kept clean, or cleaned periodically,

is essentially an economic one. "In general, the wisest and cheapest course in the long run is to keep the lines clean from their inception," he said.

B. M. Lulhere, technical supervisor, Southern California Gas Company, Los Angeles, presented an interesting discussion of weather forecasting methods and their use by gas companies. Mr. Lulhere told how temperatures, humidities, and air pressures at various levels of the atmosphere are obtained by a radio-meteorograph, a little instrument which is attached to a hydrogen-inflated balloon and sent into the atmosphere to heights of ten or fifteen miles, automatically radioing back the desired information. He pointed out that foreknowledge of the weather is of great importance in the operation of a gas utility.

A study of the compressibility effects in high compression of natural gases was presented by C. Lambert Moore, El Paso Natural Gas Co., El Paso, Texas. After setting forth the various theories on this subject, Mr. Moore stated that there are wide gaps in the test data necessary to consider the effect of compressibility on the mechanics of design. He urged the establishment of a clearing house of information.

### Gas Flow Computations

P. McDonald Biddison, consulting engineer of Dallas, reported on "Gas Flow Computations" in a paper which was described as one of the most valuable presented in recent years. Mr. Biddison supplied new information on methods of solving gas flow problems in a manner enabling the use of information on friction factor that has become available since the publication

of Monograph 6 of the U. S. Bureau of Mines. The highly complicated equations and formulae covered by Mr. Biddison will be printed and made available to the gas industry at an early date. R. A. Ransom, engineer, Panhandle Eastern Pipe Line Co., New York, presented a discussion of Mr. Biddison's paper.

The morning transmission session closed with a description of a newly developed pipe line flow calculator by C. F. deMey, rate engineer, The Ohio Fuel Gas Co., Columbus. Devised as a shortcut in the methods commonly used in the solution of the Weymouth gas pipe line flow formula, the calculator, which consists of a chart and a reading mechanism, is said to eliminate the most troublesome feature of slide rule solution. In addition, certain other features have been added which permit the solution of practically every type of problem involving the computation of pipe line capacity.

Most of the afternoon transmission meeting was devoted to a panel discussion covering modern compressor station design. Speakers included: C. S. Kenworthy, Natural Gas Pipe Line



Margaret Siddal, Dallas, tries her hand at the CP branding corral under the direction of J. J. Woody

Company of America, Chicago; O. H. Moore, Lone Star Gas Co., Dallas; H. P. George, Southern California Gas Co., Los Angeles; T. H. Kerr, The Ohio Fuel Gas Co., Columbus; B. L. Rogers, Lone Star Gas Co., and Paul F. Marx, Northern Natural Gas Co., Omaha. J. T. Innis, Northern Natural Gas Company, Omaha, described his company's experience with 24" solid welded pipe lines, and W. J. Garner, Lone Star Gas Co., spoke on "Metalizing."

The ingenious new method of refrigerating natural gas to a liquid, storing it for regasification when needed, which has attracted nationwide interest since it was introduced received further attention at the convention in a progress report by John A. Clark, chief engineer of the Hope Natural Gas Co., Clarksburg, W. Va. Mr. Clark described the results of the first winter's operation of the \$1,250,000 plant recently completed at Cleveland, Ohio, to test the practicality of this method. His paper is printed in full elsewhere in this issue of the MONTHLY.

#### Hydrate Study Continues

A valuable investigation of the water content of compressed gases made in connection with the Bureau of Mines' study of gas hydrates in which the American Gas Association is co-operating, was reported in a paper by W. M. Deaton and E. M. Frost, chemists at the bureau's Amarillo plant. Experimental work with four different

gases—two natural gases, air and helium—showed that the water content of the gases when saturated at pressures up to 600 pounds per square inch may be considerably higher than the values calculated from vapor-pressure data by the use of common gas laws. The correction for compressibility makes the disagreement greater, the authors reported.

According to Messrs. Deaton and Frost, the saturated water content, or the water carrying capacity, varies with

the kind of gas. Helium shows practically no deviation from values calculated from water-vapor pressure data. The saturated water content of the natural gases studied was 30 to 35 per cent greater than the calculated value at this pressure and temperature.

"Welded Pipe Headers and Their Reinforcement" were the object of a comprehensive and authoritative discussion by Eric R. Seabloom, supervisor-

(Continued on page 239)

## CP Branding Corral Is Convention Hit



In front of the CP branding corral that stampeded the convention delegates—left to right: Alton B. Parker, CP sales counselor; Watson E. Derwent, A.G.A.E.M. president; Major Thomas J. Strickler, A. G. A. president; John E. Bogan, CP promotion director; and Lloyd Ginn, chairman, CP Sales Committee. In the background is J. J. Woody, Texas cowpuncher, who supervised the branding of CP souvenirs

### Gas Air Conditioning Show at Dallas

An outstanding exhibit of gas summer air conditioning equipment attracted large crowds of visiting gas men to the Baker Hotel, Dallas, Texas, during the annual Natural Gas Section Convention, May 5-7. This feature of the convention was a revelation to many who were not familiar with the strides made in providing equipment for this fast-developing gas industry market.

Among the exhibitors were: The Surface Combustion Corp., Toledo, Ohio; The Bryant Heater Co., Cleveland, Ohio; Servel, Inc., Evansville, Ind.; Williams Oil-O-Matic Heating Corp., Bloomington, Ill.; and the Mills Novelty Co., Chicago.

THE CP seal (meaning Certified Performance), acknowledged to be the gas industry's sales promotional spearhead, formed an exciting and interesting phase of the 36th Annual Natural Gas Convention, held in Dallas, May 5-8, and was indelibly impressed in the memory of every convention delegate.

John E. Bogan, sales promotion director in charge of this important industry activity, and Alton B. Parker, national CP sales counselor, gave convention delegates an opportunity to view CP Gas Range activity through the eyes of the legendary glamor of the Old West. Guests at the convention were reminded of CP on every hand, from the "yippees" that echoed from a 15-foot branding corral in the lobby of the Hotel Adolphus (convention headquarters) to the harmonious strains of the roving CP Ranger Band. It was to the corral that convention guests stampeded to receive genuine Texas cowhide convention souvenirs, branded with the CP seal before their very eyes by old-time cowboys.

Beautiful lariat-looping CP cowgirls enhanced the corral. Full-size top grain Texas steerhides, suspended across the lobbies of the Adolphus and Baker Hotels, bore the message, "Natural Gas Convention, Dallas, 1941—For Everyone in '41 It's CP." These steerhides were bathed in ever-changing varicolored lights, and drew much attention.

The corral exhibit of prize Texas longhorns, ornate saddles, spurs, and chaps, was actually a Texas cowpuncher museum, and the object of unusual interest to those in attendance. Tickets entitling guests to these novel branded souvenirs were obtained by convention delegates at the registration desks.

Traffic was actually stopped inside and outside the Baker and Adolphus Hotels by the CP Ranger Band, an instantaneous hit with their bagful of popular songs and tunes from the Texas prairies. Painted on the backs of their colorful shirts were such timely slogans as: "You've got something to sing about, too. It's CP," and, "You can't go wrong singing this song—For Everyone in '41, It's CP."

# Deeds, Then Words . . . A Guide to Utility Conduct During the Emergency



Thomas J. Strickler

IN a former period in European history marked by war, chaos and the overthrow of established governments, a pattern similar in many respects to that prevailing today, a gifted French gentleman named Talleyrand made this sage observation, "There is one person wiser than Anybody and that is Everybody."

Talleyrand, you may recall, successfully survived and wielded influence under a monarchy, through a revolution, under a consulship, under an empire and finally, under a monarchy again—an achievement that merits respectful attention amid the extraordinary changes of today.

## People Are Supreme

Wise in human nature, Talleyrand knew people. A king and queen went to the guillotine but the people continued to be there, and so did Talleyrand. A little corporal became a great general, a First Consul, an Emperor. He traveled to Austerlitz, to Moscow, to Waterloo, and to St. Helena. But through it all, and after it all, there were the people.

Talleyrand had no illusions as to government—whether it be called democracy, monarchy, or dictatorship. He saw through political changes to the real king-maker and king-destroyer—the public. He was keen enough to understand that in the final reckoning the people are ruler and employer, and they will be served. Reviewing it all in retrospect he said, "There is one person wiser than Anybody and that is Everybody."

Address before A. G. A. Natural Gas Convention, Dallas, Texas, May 5-7, 1941.

By THOMAS J. STRICKLER

President, American Gas Association

In the light of what history and our own experience teaches us, we who are in the gas industry have a splendid opportunity to increase the public's estimate of us during these uncertain times. Today's world crisis has had its counterpart many times in the past. The only marked difference is one of tempo. It is the manner of living—and of dying—that has changed, not the minds and behavior of the people. Human nature remains the same. The power of public opinion has lost none of its strength. Dictators can make it inarticulate for short periods but they cannot destroy it.

## Realistic Guideposts

Keeping these fundamentals in mind and applying them to the present emergency as it confronts the United States and more particularly our own business, we might as well be realistic and accept certain facts as a guide to our conduct.

Bruce Barton, advertising executive and former member of Congress, commenting on one phase of the subject, the relation between government and industry, has this to say:

"It is not important what you would like to do; it is not really very important what the government would like to do. The important questions are: 'What will the American people think?' 'What will the American people do?'"

Continuing, he says: "Fundamentally, the people of the United States *think* they should have a better life, more comfort, more security, more opportunity, more hope. What they are likely to *do* is to make a choice between industry and government as to the quickest and surest path to the achievement of all these benefits. Industry and government, at the moment, are com-

petitors for the confidence and favor of the same patron, the public. Government knows it; industry too often neglects it, and wonders how the dust got on the seat of its pants."

Let us admit, however, that a great and beneficial change has come over industry in the valuation it now places on public opinion and the effort it is making to create and maintain favorable public sentiment. Our thinking on this subject has advanced so far that should any person in the gas business deliberately violate the commonly accepted ethics of good public relations we would consider him to be a menace not only to the gas industry but a liability to all industry as well.

## Our Responsibility

We know because we have seen it happen in our own time that no industry has any moral right to allow itself to be unexplained, misunderstood, or publicly distrusted, for by its unpopularity it poisons the pond in which we all must fish. In the broader concept of public relations which we have come to acquire, we know that good will of an industry's employees, its stockholders, and its customers is not its responsibility to itself alone. There is a larger and much more important responsibility, namely, one involving the continuance of the industrial system under which this nation has prospered and with which all of us together either stand or fall.

I have had the privilege of addressing a number of state and regional conventions and conferences since the American Gas Association honored me with the office of president. My talks have been devoted largely to national defense and the participation of the gas industry in that program. In numerous conversations with gas men I know something of the splendid record of performance established by the gas industry in meeting the special demands made upon it in this emergency



period. I have interviewed certain important officials in Washington who have complimented us on the job we are doing. And I have heard at first hand from the operating men themselves how many have been the difficulties imposed on them.

In a word, we have been asked by the authorities to produce, and we have made good. In the meantime our normal services have been continued with their accustomed efficiency. When I review the industry picture I cannot escape the conclusion that we owe an obligation to the public to tell it what we are doing. In this world it is singularly easy not to get credit. We deserve credit for past and present performance and we should solicit it. Remember, an informed public is generally a sympathetic and appreciative public. People today are thinking more about national defense than any other subject. I recommend that we keep in step with this thinking.

#### Getting Credit for Good Conduct

"Your business and your personal reputation will survive this emergency either greatly damaged or greatly enhanced," Bernard Lichtenberg, president of the Institute of Public Relations, declared recently at the Boston Conference on Distribution. He then went on to say:

"In a crisis, public opinion is certain to find scapegoats. But it is also certain to seek heroes. And public opinion today can be controlled by any individual or group that has the means and the intelligence.

"Business men have been long accustomed to look microscopically at their affairs. Today they have a need to look telescopically, too. Foresight of the years to come, and of public reactions in those years, is the most needed business quality. To all who want a definition of a practical public relations program at this time, I will suggest a simple and accurate one.

"Good public relations work consists in good conduct, and in getting credit for it."

To avoid any possible misunderstanding I should make myself clear on one point. I do not pose as a specialist in anything, least of all the practice of public relations. I have no program to offer, no recommended procedures. Moreover, I do not envision this as an industry job to be done on an industry-wide scale. To be explicit, national advertising is emphatically not the answer. It is a job for each company to

do, a job in line with its own individual contributions to national defense.

There is another reason why the story should be told locally for local consumption. We like to dream of ourselves as a united nation, one people, with one common goal. That is an unrealized ideal. We are a nation of group alliances, and also of group hostilities. Our public is made up of many smaller publics, each subject to its own

"Ultimate success in the activities of war or peace depends on energy. Today in the Gulf South it is the clean, blue flame of natural gas whose energy turns the wheels of thousands of factories and plants. Natural gas has created new industries, given new life to old ones . . . brought forth new products for the nation's enjoyment and use.

"Our organization with more than 3,000 employees, over 5,000 miles of pipe lines and adequate facilities for production and transmission of natural gas are prepared to do their part in preserving America."

On March 12th of this year Secretary of Navy Knox dedicated the \$44,000,000 naval air station at Flour Bluff, Texas. That same day the Houston Natural Gas Corporation told its public in a newspaper advertisement, "we are glad that our company was chosen to supply this vital defense base with natural gas—thus making us a part of the great defense program." The heading of the advertisement was "Natural Gas Service for Defense, Home and Industry" and a portion of the copy expanded the theme, "we believe in the future of South Texas."

#### Navy Yard Best Customer

Jumping across the Continent we find The Brooklyn Union Gas Company telling its public, "Right now, we're busy on essential work for national defense—helping make searchlights and bomb sights and engine gears and aluminum for airplanes and chemicals and a lot more.

"About the biggest customer we have here is the Brooklyn Navy Yard. As you know, this place is practically a city in itself, covering about 300 acres and employing a large number of workers. Gas works night and day at the Navy Yard—in a big way! Your gas company helped to design and equip many of the great gas furnaces and forges now busy with vital shipbuilding activities."

Detroit newspapers recently carried an advertisement by the Michigan Consolidated Gas Company entitled, "The Nation Depends on Detroit Industry and Detroit Depends on Gas." The advertisement goes on to say that Detroit industry has the responsibility of producing a half billion dollars worth of essential defense materials and that gas fuel is a helper whose stature is steadily growing. The advertisement ends with this statement, "Gas, valued



**READY, WILLING and ABLE to Serve**

The transportation network, showing the location of a plant in the Gulf Coast area, is the first step in the development of the Gulf Coast. The network is the first step in the development of the Gulf Coast. The network is the first step in the development of the Gulf Coast.

The Houston Pipe Line Company, with its extensive facilities, is the first step in the development of the Gulf Coast. The Houston Pipe Line Company, with its extensive facilities, is the first step in the development of the Gulf Coast.

**HOUSTON PIPE LINE CO.**  
Solemark of Houston Oil Company, Inc.  
Natural Gas

*A current advertisement of the Houston Pipe Line Company in Fortune magazine proclaims the fact that the natural gas industry is "ready, willing and able to serve" national defense and other industries*

leadership. Over all is the general pattern which unites us as Americans. But we belong to our smaller public, first.

So, I repeat, the job is a local one, and I am glad to say that it is already being done in the form of local newspaper advertising by several gas companies. I shall mention four typical instances that have been called to my attention. Doubtless, there are others of which I am not aware.

Surely you have seen those striking advertisements of the United Gas Pipe Line Company in *Time*, *Fortune*, *Business Week* and other publications, exploiting the advantages of the Gulf South. The same company utilizes newspaper advertising to tell the public what it is doing to serve the nation's defense program and each message ends with this statement which contains a world of meaning, "Dependable Natural Gas Service Doesn't Just Happen."

Customers of this company pick up their newspapers and read this:



helper for Detroit industry, is ready for the increased and exacting demands of 1941."

Commenting on the institutional advantages of such advertising, the magazine *Business Week* says:

"The first companies to invoke defense as an advertising theme were the manufacturers of heavy goods directly related to war production, prime examples of which are the airplane manufacturers, steel makers, and machine-tool producers. Immediate sales have long since ceased to be a problem for most capital goods companies, but they have other problems—maintaining sound public relations, holding down ill will among neglected customers, cultivating future customers, and keeping up the morale of sales organizations. Telling the part a company is playing in national defense is an ideal way of attacking these problems."

But there are ways other than newspaper advertising to win public approval for work well done. I will mention only one and I do this with special pleasure because it offers almost unlimited possibilities. I refer to home service and invite your attention to that excellent report issued by the American Gas Association's Home Service Committee and entitled, "The Home Service Departments in the Gas Industry Cooperate in National Defense." Here are two excerpts from that report:

"Gas companies are in business to serve their local communities. Home service has always been interested in community activities, and as community groups are now becoming more health conscious, home service automatically will consider better balanced menus, the adequate diet, how to buy food more wisely and how to cook it better with the modern gas range because it will save food, fuel and time. It is timely to interpret our work with customers by putting the emphasis on better health, time and money saved and so do our bit in helping our nation in its defense program."

"We have been emphasizing the importance of good health as a defense measure, but surely we will all agree that good health is also one of the corner stones for better living in times of peace. What our men and women will do in times of national emergency will go a long way in establishing good will and the respect of our community in the peace which is sure to come later."

Let us remember that home economists hold a strategic position in national defense as well as in the gas business because they have the confidence of the homemaker, they have ac-

#### Next Issue Combined

The next issue of the A. G. A. MONTHLY will be the combined July-August issue which will be published on July 15.

cess into her home, and many have years of experience. They are excellently equipped to do an outstanding job of public relations for us and I recommend that they be given every encouragement.

In bringing this to a close, I suggest we approach the subject by asking ourselves this question, "What is it that we want the public to know about us in these days when the nation is swept along by irresistible currents?"

## Franklin Institute Honors R. M. Conner



R. M. Conner

was awarded to Raymond Mower Conner, director of the American Gas Association Testing Laboratories.

This medal is awarded to the author of the most notable advance in knowledge or improvement in apparatus; in method concerning the science and art of gas manufacture and its distribution or utilization in the production of heat, illumination, or power.

Mr. Conner has been director of the A. G. A. Testing Laboratories since their foundation in 1925 and under his direction much notable work has been accomplished. Three primary points of view have been kept in mind in this work. They cover minimum requirements for satisfactory performance, substantial and durable construction, and safe operation. Some idea of the amount of work which must be undertaken may be gained from the fact that approval of a domestic range requires 250 separate tests.

As a result of fifteen years work, twenty-seven American standards have been developed covering ranges, central heating plants, water heaters, space heaters, and

My answer would be something like this: First, we want the public to know the truth. We want to be accepted for what we are—good, law-abiding, patriotic citizens engaged in a business that is not only necessary to the American standard of living, but is vitally important in making American defense invincible. We want the public to know that we are nice folks to do business with, that we are a credit to the community and an asset, and that we are experts at our jobs.

There is much to gain by conveying this knowledge to the various communities we serve. And if my personal observation is worth anything, I believe the time was never more appropriate to do it than right now.

refrigerators, and more than 17,000 different models of appliances have been listed on the approved list. Very important research work has also been undertaken by the staff of the laboratories in technical questions involved in the utilization of gas.

The award of the Walton Clark Medal by one of the leading scientific institutions in the country is a fitting tribute of recognition of Mr. Conner's contribution to the safety and the comfort of gas users.

## A. G. A. Testing Rush On

THERE is a rush on at the Laboratories of the American Gas Association at Cleveland where gas appliances are tested and approved before going into service. Cause of the rush is the thirty-day delivery clause in Government orders obtained by manufacturers of gas ranges, water heaters and other appliances.

"As an indication of how rapidly things are moving," R. M. Conner, director of the Laboratories, reports, "one manufacturer who had to submit a final production model before approval could be given, flew to Cleveland and brought his appliance with him. It was examined that day and in the evening he was back in his factory and production was underway."

"In another case a manufacturer designed and built a new gas appliance to meet the Government's specifications and within forty-eight hours had completed the preliminary tests and had the appliance in our Laboratories for examination. It was given the earliest possible attention and within a matter of days final appliances were coming off the production line."

# Industry Helps America Keep House ... with Carefree Time-Saving Kitchen Appliances

IN interviewing women who are typical American housewives—those featured in our current article series, "How America Lives" (recently published in a book by that name) we found that they like their jobs, even those who feel the economic pinch. Most would rather keep house than have any outside job, because it gives them a home, children, companionship and because today their hours are shorter, their work easier and more to their liking than it once was. Much of this is due to the years of effort spent toward this end by the equipment industry. But housekeeping isn't an "easy snap" yet for the average American housewives. Ninety-five per cent of them have no outside help. When their children are small, they put in 50 or 60 hours a week, sometimes more. A bit staggering? Not at all. Our grandmothers worked 100 hours. One of the time-consuming tasks

*A small modern apartment "Pullman" kitchen with an up-to-date gas range makes minutes count for Mrs. Nelson Grills who has a full-time office job as well as a housekeeping job for two*



By GRACE L. PENNOCK

Household Editor,  
*The Ladies' Home Journal*

then was keeping the cook stove going—getting it right for baking, building and keep up the fire, sometimes bringing in the fuel. Now-a-days, hours of hard work are saved by modern ranges. I believe a range is the most important piece of equipment there is. Rightly, it is called the "heart of the home." In kitchens where there is no running water, no sink, no refrigerator, you will find there is always something upon which to cook, for civilized man likes his food cooked! You know the old rhyme:

"We may live without poetry, music and art;  
We may live without conscience and live without heart;  
We may live without friends; we may live without books;  
But civilized man cannot live without cooks."

## Cooking—Then and Now

Modern ranges have made cooking simpler, pleasanter, surer and shorter. Ten years ago we thought ranges were pretty good and called them "modern," even if they had their temperamental moments. In a 1930 issue of the old *Delineator Magazine*, I wrote:

"Stoves as well as persons have their good points, but their peculiarities too, and in spite of the fact that stoves are greatly improved, those which many of us are using are far from perfect and they still do unexpected things. They have to be humored, some in one way, some in another. . . . If you want to get the most efficient service from your stove, study it, learn its advantages, its good points, and make the most of them. But if it is inclined to be a bit temperamental, care in the arrangement of cooking utensils in the oven, or in placing foods on the broiler will help. In other words, study your stove if you would get good results."

A great many of these temperamental stoves are still in use today. But there

are also millions of the very much newer and truly "predictable" ranges in use. Every year in the last decade, more than one and one-half million new gas ranges have been sold. Gas ranges purchased within the last five years have changed the pace of cooking in millions of kitchens. The effect the gas industry alone has had on cooking and kitchens is enormous. More than one and one-half million new gas ranges going into the kitchens of American homes every year is a lot—it is more than 500 ranges every year in every one of the 3000 miles that stretch between New York and San Francisco!

## Housekeeping Is "Big Business"

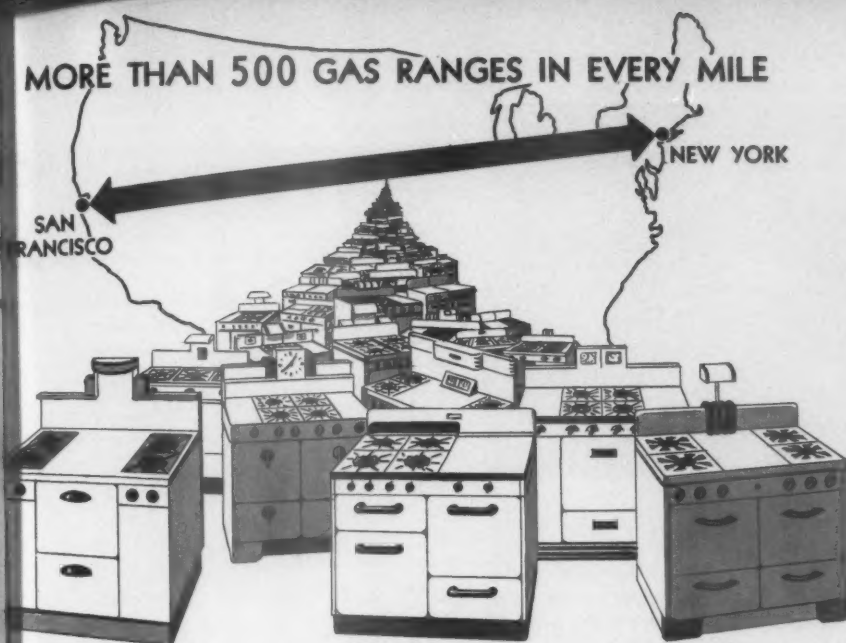
A vast number of meals are cooked during a year on every one of those new ranges. At the rate of 1000 meals per year per family, just multiply that, if you will, by one and one-half million homes where the cooking is done with far more success and pleasure than ever before.

Make no mistake, America's housekeeping is *big business*—and it totals up annually to constantly increasing figures. During 1940 these women spent \$600,000,000 for household appliances, and that means new ranges, new refrigerators, new vacuum cleaners, washing machines, ironing machines, irons and other similar appliances. The bill they paid for household operation alone—cost of fuel, light, refrigeration, laundry and telephone—amounted to over \$5,000,000.

But, who are these women who spend so much money? They hold the purse strings of the nation. You meet some of them every day in your home towns. We met them in the homes we visited in the "How America Lives" series,—from Burlington, Vermont to Cucamonga, California. But let me introduce you to a few of those we know:

For example, Mrs. Stanley Case,

MORE THAN 500 GAS RANGES IN EVERY MILE



*A graphic illustration of the fact that the 1,743,000 gas ranges sold last year would average more than 500 in every mile of the 3000 odd miles between New York and San Francisco. At the rate of 1000 meals per family the number of meals being cooked on new gas ranges each year is startling*

wife of an inspector on the assembly lines of General Motors in Detroit, Michigan believes the best career is "mothering" and the second-best is housekeeping. Her scrubbed and tidy house, her neatly dressed children, her quick step, ready smile, clear eye, show the joy that goes into every task.

#### *Resourceful Housewives*

Ginger Chase, our first bride, found housekeeping absorbing, it was fun, yet a very serious matter too, baffling at times, but easily manageable when approached with determination. Mrs. Nelson Grills, married less than a year, keeps house and runs an outside job too. Mrs. T. B. Wright, wife of the owner of a department store in Burlington, Vermont, looking back over forty years of homemaking, has just as much enthusiasm for the job as she had in the beginning. Mrs. Aulden Griffin of Cedar Rapids, Iowa, mother of two, and wife of an engineer, does her own housework, is president of a Woman's Club, coaches school dramatics. When pushed for time, she irons evenings, when her husband can sit by and they can have a good gossip.

Rose and Anne St. Andre are cheerfully keeping house together for their two families,—which include three small children,—in one five-room

house while their husbands are on a defense job. They think keeping their families together most important of anything to them and because of good planning and these girls' determination to put it through, theirs is a happy orderly home.

Naturally with such close personal contact with these families, we learned a great deal about the inside workings of individual homes. We talked over with each housekeeper her particular problems and arrived at conclusions about best methods to solve them. Some of these findings will interest you:

These typical American women are especially keen about their kitchens—our decorating editor declared it to be the best dressed room in the homes of the Journal families whose living rooms were not up to the standard set by the kitchens. Perhaps, it's because American

women do so much of their own work and spend so much time in their kitchens that they improve these first. Or, it may be due to the combined efforts of magazine editors, utility companies, and appliance manufacturers who have educated homemakers in kitchen planning and modernizing.

Convenient as they are, these kitchens are not all perfect yet. Three-quarters of the women we visited this past year wanted changes and their complaints were varied—the kitchen was too small, too large, had tight corners around the range or sink, not enough cupboards, too little work space, no place for a mixing machine, not enough room to wash dishes, and in several, new equipment was needed, so it was suggested and planned for.

American housewives cook less by "guess and by golly" than their mothers or even less than their grandmothers did. They are always eager for new recipes. Even experienced cooks follow recipes to a "T" at least the first time. Modern markets offer a wide range of foods, modern refrigerators keep them in condition, modern heat-controlled ranges help them to attain perfection in all the food they cook. The housewives themselves are fully aware of all that this modern equipment does to make their work easy and pleasant.



*Taking care of two families, which includes three small children, both husbands on varying defense work schedules, five rooms for all to live in, is the home-making job Rose and Anne St. Andre are doing together with the aid of labor-saving kitchen appliances*





President A. J. Gonnoud, Kings County Lighting Company, presenting a McCarter medal to James Burns for an outstanding act of life saving. Harold J. Jessup and Sylvester McGill, on the right, were awarded Certificates of Assistance

## More Employees Receive McCarter Medals

**W**ITHIN recent months a number of gas company employees have joined the ranks of those who have won the coveted McCarter medal and certificate for performing outstanding acts of life saving by the Schafer prone pressure method of resuscitation.

Among the recent winners of the McCarter medals are: John J. Kiely, serviceman, Connecticut Light & Power Co., Thomaston, Conn.; Patrick Higgins, Elizabethtown Consolidated Gas Co., Elizabeth, N. J.; William McDonough, fitter, The Philadelphia Gas Works Co., Philadelphia; and James Burns, Kings County Lighting Company, Brooklyn, N. Y. In all cases, the presentations were made before special meetings of company officers and employees.

The presentation to Mr. Burns was made by Andrew J. Gonnoud, president of the Kings County Lighting Company, who congratulated him on the initiative and good judgment displayed in the saving of life, the protection of the public and prevention of damage to property. Two associates of Mr. Burns, Sylvester McGill and Harold J. Jessup, received McCarter certificates of assistance for their part in the rescue.

The award to Mr. McDonough was the fifty-sixth McCarter award to be presented to Philadelphia Gas Works employees since it was made available in 1924.

The McCarter medals are donated by Thomas N. McCarter, chairman of the board, Public Service Corporation of New Jersey and are awarded by the American Gas Association.

## Hugh McNair Dies

**H**UGH MCNAIR, of Winnipeg, past president of the Canadian Gas Association who was widely known in utility circles in this country, died March 21 after a short illness. Mr. McNair represented the Canadian Association as president at the

American Gas Association convention in Chicago in 1933 when a large group of British and European gas engineers made a pilgrimage to this country and Canada.

Born in Scotland, Mr. McNair was graduated from Glasgow University in 1903. He went to Winnipeg 29 years ago and for a number of years was manager of the gas utility, Winnipeg Electric Railway Co., retiring March 1, 1938.

## Maintaining Gas Service in War Damaged Areas

**T**HE National Technological Civil Protection Committee which was appointed to aid the War Department in the organization of civilian defense recently issued a booklet covering "Authentic Information Secured in Britain by American Observers," which contains interesting data on utility service in war areas. Of particular value to the gas industry is a section devoted to the London Gas Center and other areas organized to maintain gas service under war conditions.

The present system provides a gas engineer "adviser" for each region who is a working engineer. His duty is to advise the Regional Committee on Gas Supply regarding all supplies in the country, so that in case of emergency gas can be drawn from the nearest region where it is available. Gas service generally has been maintained, although interruptions of from two to three weeks have been reported.

When gas storage tanks are severely damaged, gas is run straight from the producers into the pipes. Gas works have been hit but with surprisingly little damage. Gas tanks have been holed but this has resulted only in a fire easily dealt with and not an explosion.

In dealing with the problem of gas supply under air raid conditions, the most important thing appears to be communication. There must be not only one telephone exchange but supplementary ones.

Experience has indicated that it is not

easy to knock out a gas works pumping station. It is most important to have available spare retorts; also companies should have spare pumping plants established at the beginning of the war which should be as well protected as possible.

Other information of this character is given in the booklet which is available to the gas industry, according to W. Cullen Morris, American Gas Association representative on the committee. Mr. Morris has advised the Association that arrangements have been made with C. A. Reves, Polygraphic Company, 310 E. 45th Street, New York, N. Y., to stock the pamphlet, "Authentic Information Secured in Britain by American Observers," and furnish it at a price of 10¢ per copy, postage free, cash with the order.

## William A. Wood Is Dead at 88

**W**ILLIAM AUSTIN WOOD, former president of the Boston Consolidated Gas Company, Boston, Mass., and widely known consulting engineer, died May 19 after a long illness at the age of 88.

Mr. Wood, who retired in 1931 after forty-seven years of service with the gas company, was its president from 1916 to 1921 and its consulting engineer from 1921 until his retirement.

Born in Northampton, he spent his youth in Syracuse, N. Y., where his father was superintendent of a gas company plant. He received an A. B. degree from Syracuse University in 1875 and later a degree in Civil Engineering. Columbia University awarded him the degree of Master of Science in 1877.

After working for a time for a Syracuse gas company, Mr. Wood went to Boston in 1884 to become plant superintendent of the old North End station of the Boston Gaslight Company, which later was merged with the Boston Consolidated Gas Company. He was a member of the New England Guild of Gas Managers, American Gas Association, New York Society of Gas Lighting, New England Gas Association, Boston Engineering Society and Phi Beta Kappa fraternity. He was the founder of the Engineers' Club of Boston and for many years served as secretary of the Class of 1875 of Syracuse University and the Boston alumni association of the university.

Mr. Wood leaves three sons, Austin C. of Milton, George B. of Rockland, Me., and Frank A. Wood of Beverly; three grandsons and a great-granddaughter.

## Called by Army

**F**IRST LIEUTENANT W. W. Wallace of the Army Ordinance Reserve, service engineer of Servel, Inc., Evansville, Ind., has been assigned to active duty with the Army at the Savannah Air Base, Savannah, Ga.



# Storage Progress . . . Practical Operation of Cleveland's Liquefied Natural Gas Plant



John A. Clark

LAST year at the Atlantic City meeting of the A. G. A., it was my privilege to read a paper describing the development of a new type of storage plant being constructed by The East Ohio Gas Company in Cleveland, Ohio. This paper is a progress report describing the results obtained by the first winter's operation of this plant, and giving some of the conclusions reached after the first winter's practical operation.

## Long Experimentation

This plant was the outcome of an idea of long standing that some method should be made available to take care of the very few days of extremely heavy load encountered by any natural gas company with a large percentage of its load coming from house heating, without the large expense of laying additional pipe lines. An idea was developed by H. C. Cooper, then president of the Hope Natural Gas Company, that, if a practical method of storing natural gas as a liquid could be developed, the enormous reduction in space occupied, about 600 to 1, might make liquid storage the answer to this problem. With this idea in view, laboratory experiments were carried out for over a year on the behavior of liquid nitrogen and the effectiveness of various materials as insulating material to keep heat from filtering into a tank filled with this liquid at a temperature of around 300° F. below zero.

Following the laboratory experiments, a small pilot plant was built at one of the Hope Natural Gas Company's plants in West Virginia, capable

Presented before A. G. A. Natural Gas Convention, Dallas, Texas, May 5-7, 1941.

By JOHN A. CLARK

Chief Engineer, Hope Natural Gas Company, Clarksburg, West Va.

of reducing to a liquid around 300,000 cu.ft. per day of natural gas and a storage tank holding slightly under a million cu.ft. of gas in the liquid phase. This plant was operated successfully for about six months, and showed that the idea was perfectly practical and that the loss due to evaporation would not be excessive. As a result of this experience, it was finally decided by the management that it was practical to build a similar plant on a large scale in the City of Cleveland to take care of the rapidly rising sales, occasioned by the steadily increasing number of domestic consumers.

At that time careful studies were made of two or three different methods of liquefying the gas, and it was decided that at least two of them had about equal possibilities. However, after weighing the disadvantages and advantages of each, it was finally decided to use the Cascade system where the temperature is progressively re-

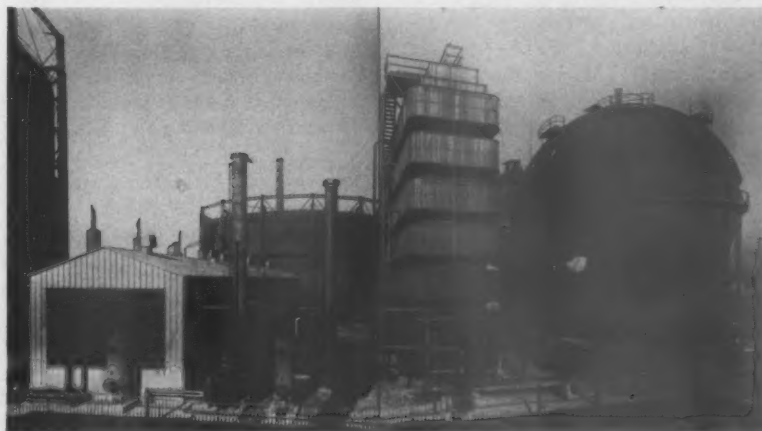
duced by using first an ammonia condensing circuit, then an ethylene condensing circuit, and finally a natural gas condensing and expansion circuit.

Before attempting to liquefy the gas, it was found necessary to completely remove all traces of carbon dioxide and water, which was done by passing the gas through an amine solution and finally drying it with granulated alumina. It was also found to be of very great importance to remove every trace of lubricating oil put into the gas while being compressed.

## Four Million Cu.Ft. Capacity

The plant was designed with a capacity to turn into a liquid 4,000,000 cu.ft. of natural gas per day, and to do this required 3,250 horse power divided up into 600 H.P. for raw gas compression, 950 H.P. for recycling gas compression, 1200 H.P. for ethylene compression and 500 H.P. for ammonia compression.

The plant was practically completed, in all essentials, on January 29, 1941, and operation was started at once, and on February 7 the first production of liquid gas was started. This late start



A view of the Cleveland plant for liquefying and storing natural gas in large quantities. Note the cooling tower in the right center and one of the three storage tanks which make up the plant

which was due to the inability of some of the equipment manufacturers to make deliveries on schedule, fortunately did not cause any difficulty as we had a very unusual winter with no cold waves of any importance in December or January.

The first cold wave hit on February 19, and at that time there were 15,000,000 cu.ft. of liquid gas in storage, and on February 19 7,000,000 cu.ft. were regasified and put back into the lines and about 4,000,000 cu.ft. on February 20. On February 21 the weather moderated and it was possible to go back to liquefying again. On March 17, when the most severe cold wave of the winter hit Cleveland, there were 50,000,000 cu.ft. in storage. During the two days of this cold spell, the plant fully justified its construction, as 16,000,000 cu.ft. were regasified and put back into the city plant on March 17 and 5,000,000 cu.ft. on March 18. Due to the inability to foresee what was ahead in the way of weather, and the desire to conserve all liquid possible, only the minimum amount necessary to keep operating conditions normal was used.

#### *No Shortage of Industrial Gas*

The result to the gas company of this plant was the ability to handle without curtailment an industrial load of over 40,000,000 cu.ft. per day, which most certainly would have been curtailed or shut off for at least two days, with the resultant loss of confidence on the part of the industrial users. Due to the wide variation of the hourly load curve for any one day, it was found that the use of 25,000,000 cu.ft. of liquid during the daylight hours would enable the company to carry an extra connected load of around 40,000,000 cu.ft. per day.

The regasification of the liquid was not started until the pressure in the city plant had started to decline materially. Its use was apparent in a few minutes and eventually extended back through the main city belt lines over 15 miles. It also developed that the gas fed directly at the point of consumption was much more useful than if fed at any other point, as here it was all clear gain, with no added congestion in transmission lines loaded to capacity.

In regard to the cost of the plant,

the figures are not very complete at the present time, due to the fact that the work was not entirely completed last winter and several construction accounts are not closed at this time. However, the final cost will run around \$1,250,000 divided roughly into: engines with foundations and buildings, \$260,000, the three spheres and piping, \$420,000 and the remainder in piping, cooling tower, heat exchangers and auxiliary equipment. Also included was an already installed boiler plant which was reconditioned and put in service.

As can easily be appreciated, a great many of the design ideas were entirely theoretical, and every control and safeguard was installed. With the practical experience of the design and operating of this plant, a considerable amount of expense can be eliminated in the next plant. Also a plant built in the heart of a large city required very efficient and expensive muffling for the gas engines, unusual fire protection and also building under union closed shop conditions. Built under the conditions of the average compressing station, the first cost for the next plant can be materially reduced.

#### *Operating Costs*

Due to the short time the plant was actually liquefying and the fact that construction work was going on simultaneously, there are no reliable figures on operating costs, but the experience obtained allows a very good estimate of the probable cost of liquefaction and regasification. The plant was designed for and will make, after some tuning up, 4,000,000 cu.ft. per day of the liquid. To fill a storage of 150,000,000 cu.ft. requires a run of 38 days or, allowing for starting and having to cool the piping and tanks and allowing for a few days' delay, about 50 days. To operate the equipment requires four men on a shift. Figuring the fuel gas at an average cost of 38 cents per M.C.F., the cost of filling the three tanks will be: labor \$6,000, fuel gas \$13,700, oil, ethylene and supplies \$4,000—a total of \$23,700. The \$23,700 divided by 150,000,000 cu.ft. equals 15.8 cents per M.C.F.

Now assuming that the plant is started up in October and the storage

is full by December 1, to keep the plant warm for four months will require 38,000 gallons of fuel oil for making steam, while to regasify the 150,000,000 cu.ft. of liquid will require 462,000 gallons of fuel oil or a total of 500,000 gallons, equal, at four cents per gallon, to \$20,000. The labor cost of keeping a crew available during the four months will be \$12,000, or a total of \$32,000. This divided by 150,000,000 cu.ft. gives 21.3 cents per M.C.F. for regasification, making a total for liquefaction and regasification of 37.1 cents per M.C.F.

However, we had expected, due to a cold wave seldom being of over three or four days' duration and then being followed by about a week of warmer weather, that it would be possible after a cold spell to refill the tank and to use 300,000,000 cu.ft. of liquid during a season. To do this will require an operating cost for labor, oil, fuel gas, etc. of \$73,400, or dividing by 300,000,000 cu.ft. a cost of 24.4 cents per M.C.F. Until the plant has made a full season's run, it will be impossible to say exactly which condition will be the actual one, so, for the present, it seems safe to say that the operating cost will be somewhere between these two figures. In addition to the operating costs, of course, there will have to be added the fixed charges on the first cost of this plant.

#### *Evaporation Loss*

One other feature of the plant which was very much discussed during the design was the rate at which heat from the atmosphere would filter into the inner tank through three feet of cork insulation to the liquid at a temperature of around 260° F. below zero, and what the evaporation would be per day while the tanks were standing full of liquid waiting to be used. From the experimental work and the pilot plant, it had been figured out that there would be a heat transfer of about .25 B.t.u. per cubic foot. Using these data we figured that about 500,000 cu.ft. would evaporate per day. At the present time, one tank has stood nearly full of liquid for about three weeks with all the evaporation from it and the connecting piping going through a calibrated meter. During this time, which included several fairly warm days, the

evaporation varied from 105 to 115 M.C.F. per day. Therefore, it seems quite safe to say that the evaporation with all three tanks full will be around 350,000 cu.ft. per day. This would mean that, with all three tanks full, not much over one-half of the liquid would evaporate in the course of a year.

In conclusion, I think I can say that the management feels that this plant has operated successfully for its first year and has fully justified the money invested in it. Under certain circumstances, there seems to be a definite place in the industry for a plant of this type, and it seems to suit particularly a company with a long supply line and a heavy house heating load. However, it must be realized that it is not a "cure-all" and must be carefully engineered to suit each individual case.

## Prominent New England Executive Drowns



I. T. Haddock

**I**SAAC T. HADDOCK, prominent New England utilities executive, was drowned while on a fishing trip off Martha's Vineyard on May 2. His body was recovered by fishermen near that point on May 13.

A resident of Tiverton, R. I., Mr. Haddock was a director of numerous

utility companies in New England and at the time of his death was vice-president of the Cambridge Gas Light Company and the Worcester Gas Light Company. He was active in the affairs of the New England Gas Association and served as president of that organization in 1932-1933. He was also a member of the American Gas Association, Society of Gas Lighting, Guild of Gas Managers of New England (former president), Engineers' Club and University Club of Boston.

Mr. Haddock was educated at the Massachusetts Institute of Technology where he specialized in chemistry. He entered the gas business in 1904 as chemist for the Cambridge Gas Light Company and advanced to general superintendent in 1919 and vice president in 1924. He was also named vice-president and general manager of the Worcester Gas Light Company in May, 1929. He was appointed assistant general manager of the New England Gas and Electric Association in June, 1930 and was a vice-president of this Association from April, 1931 until his resignation in May, 1938.

## Invents Pressure-Relief Device for Soft Metal Furnaces

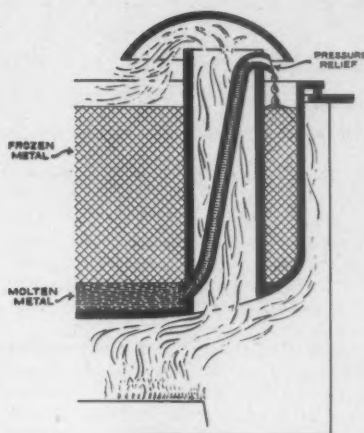


Diagram of pressure-relief device

**A** DEVICE which appears to have solved a problem which long has troubled the designers and users of soft metal melting furnaces recently was patented by Henry Hartmann, an industrial sales engineer for The Brooklyn Union Gas Company.

The device consists of a tube which runs from a point near the bottom of the metal pot, up through the hot flue gas passage, to a point just above the surface of the metal being melted. This tube serves to relieve the tremendous pressure which is generated in the bottom of the pot when heat is applied to a pot filled with "frozen" metal.

The tube acts much the same as that in a coffee percolator. It permits the molten metal under pressure to flow to the surface, thereby relieving the pressure. On the basis of extensive tests under widely varying conditions, it is believed that the device will prevent "blowoffs," cracked pots and (in the case of bottom draw-off furnaces) leaky valves.

Mr. Hartmann got the idea for the percolator tube while making a service call on the United American Metals Corp. of Brooklyn. This firm—nationally known in the printing industry—recently began manufacturing remelt furnaces. It was seeking a solution to the problem of leaky bottom draw-off valves when the thought occurred to Mr. Hartmann that a stainless steel tube, properly placed in the flue gas passage, might solve the problem. Subsequent experimentation proved the idea sound and a patent was obtained.

The patent has been assigned to the United American Metals Corp. and a number of remelt furnaces in which the pressure-relief device is embodied already are in operation in some of the country's most important newspaper plants.

Development of the device is typical of the service which the Brooklyn utility

seeks to give its customers. Since approximately 90% of all medium-sized soft metal melting furnaces are gas-fired, any improvement in the design of such equipment indirectly benefits the gas industry.

It is believed that the invention will have applications to other fields, notably in the furnaces used for heating salts in metal treating operations, for melting tin, lead and zinc, and for heating pitch and asphalt.

## Water Heating Gains

**T**OTAL sales of automatic gas water heaters in Chicago gained 8.1 per cent in 1940 as compared with the previous year. Plumber-dealer sales in that city were 14.4 per cent ahead of 1939.

During the first quarter of 1941, total sales of gas water heaters rose 30.2 per cent while plumber-dealer sales were 44.8 per cent greater than during the same period in 1940.

About 30 per cent of the single-family residences in Chicago are now equipped with modern automatic gas water heaters.

## A. G. A. Has War Origin

**I**T appears that the American Gas Association was formed primarily so that it might concentrate all the gas industry's energies toward winning the first world war. This little-known bit of history was revealed by President Thomas J. Strickler during an address before the Canadian Gas Association in Hamilton, Ontario, on May 20.

The facts, as presented by President Strickler, are these:

Representing the gas industry of the United States at the 1918 convention of the Canadian association were E. N. Wrightington, the last president of the National Commercial Gas Association, and Alfred E. Forstall, the last president of the American Gas Institute. These two gentlemen spoke on the same subject; they announced the consolidation of their two associations into the American Gas Association. In the course of his remarks, Mr. Wrightington made this statement:

"The two associations, the National Commercial Gas Association and the American Gas Institute, have been consolidated primarily so that we might concentrate all our energies towards winning the war. I want to assure you men in Canada that we of the United States are with you to win this war and win it right. In so far as members of the gas fraternity are concerned, we stand, as members of the American Gas Association, shoulder to shoulder with you as members of the Canadian Gas Association in that common cause."

Time marches on, and twenty-three years later President Strickler repeated this pledge to the Canadian gas men.



# Community Development Ideas

Culled from members of the gas industry by the  
A. G. A. Community Development Committee

*Editor's Note: The purpose of the Community Development Committee is to promote the exchange of community development ideas between gas utilities. It is hoped that this article will furnish some food for thought. If it does, its purpose has been fulfilled. Now it is a truism that you may take out only to the extent that you put in. In other words, if you enjoy reading these paragraphs and would like to see them appear again please send us community development ideas which your utility has worked successfully. You may address your communication to A. G. A. Headquarters, or to the editors of the committee. (See box on this page.)*

*It has been said that little drops of water wear away the hardest stone but that the first drops makes as much impression as the last. Community development work builds the character of a utility. Unselfish activities build business and good will for all. The Community Development Committee has been organized to function as an exchange of such ideas. We all want to be good citizens. Let's pool our ideas and make the most of the experience of others.*

From E. D. Anderson, vice-president, Northern Indiana Public Service Company of Hammond, Indiana, comes one of the finest community development activities we have had the pleasure of running across. "Through the employee organization, the Public Service Club of Hammond, the company organized a men's chorus which has appeared at various community meetings at the request of the community. This chorus was the winner of the Chicago Land Music Festival. There is, perhaps, no activity which we have undertaken which has lent more to good public relations than this. This chorus is composed entirely of employees of the company and the men have worked hard to develop a fine repertoire of numbers for their programs." Organized by G. M. Johnson, general gas superintendent, Northern Indiana Public Service Company of Hammond, Indiana, the Nipso Male Chorus has become famous in towns in which the company operates. Singing before large groups this male chorus builds civic pride, provides enjoyment for the members and presents a grand advertisement for the sponsoring company. Mr. Johnson is justly proud of this chorus and he will cheerfully answer inquiries.



From Anderson, Indiana, comes a similar idea put on a few years ago by the Central Indiana Gas Company. H. W. Thornburg will be happy to give you details about his "Parade of Progress." Anderson's "Parade of Progress" was put on in the Gas Company's office. Industrial concerns, manufacturers, as well as retail merchants were invited to participate in the "Parade of Progress" by occupying and decorating booths built by the gas company. The response of the merchants and manufacturers participating in the show was exceeded only by the en-

thusiastic response of the general public. Attendance tickets distributed to the general public contained spaces to check such household needs as a new gas range, water heater, wallpaper, roofing, heating system, awnings, painting, remodeling, etc., etc. Amazingly, hundreds of people filled out these attendance tickets; prospects were then divided among participating companies according to the customer's interest in a new purchase and scores of letters were received by the Gas Company from participating firms thanking them for tangible results. Approximately 50 local firms and industries participated in the show which drew over three thousand persons on opening day. Splendid newspaper publicity and editorials paid tribute to this community development activity.



From Charles Greason, director of publicity and advertising, Gas Service Company, Kansas City, Missouri, comes an interesting angle on the promotion of cook-

*This is the eighth of a series of articles appearing in the Monthly dealing with community development activities. Under the chairmanship of H. C. Thuerk, President, Bradford Electric Co., Bradford, Pa., the Community Development Committee herewith presents a variety of tested community development ideas that may be used by large or small companies.*

*Your own experiences are solicited. Write to American Gas Association Headquarters or direct to the Committee's Editorial Board: G. A. Saas, Citizens Gas and Coke Utility, Indianapolis, Indiana or John H. Warden, Oklahoma Natural Gas Company, Tulsa, Oklahoma.*

ing schools. The Gas Service Company builds what they call a "Merchants' Show" around each of its cooking schools in the towns where they operate. The company promoted its cooking schools in conjunction with the local Chamber of Commerce, newspapers, Rotary or Kiwanis Clubs, in fact any organization in the town that was interested in promoting with the company the "Merchants' Show" idea. The company rented the hall for the cooking school and the show and provided lumber for the building of booths for any merchants in town who were interested in displaying their merchandise. Such booths were open prior to the beginning and following the cooking school in the afternoon and were also open at night when the "Merchants' Show" was held. The organizations sponsoring the event with the company each evening provided some type of local entertainment to attract crowds to the hall. Prizes were offered to those attending but it was necessary to visit each merchant's booth and register in order to be eligible for the prize. It seems to us that the Gas Service Company has an ideal medium for promoting local civic pride and at the same time boosting their own business as well. Such small "Merchants' Shows" will take the place of Home Shows and other similar activities usually put on in large population centers.



W. C. Mainwaring, general sales manager, British Columbia Electric Railway Company, Ltd., of Vancouver, B. C., writes: "The Company actively supports the Employees Garden Association which gives prizes for the best kept employee gardens as well as sponsoring an annual public flower show." Certainly, this is an idea that beautifies a community and at the same time builds healthy employee relations as well.



Utilities who conduct radio programs have a splendid opportunity for building good will and earning the respect of their communities by plugging any city-wide activity that may be going on. For instance, devoting the commercial time of one period to the Community Fund or to Clean-Up, Paint-Up Week, etc., will endear the utility to the hearts of many citizens who will realize that such an action is unselfish and that the utility has the welfare of its community in mind.



# Personal AND OTHERWISE

## Chamber of Commerce Names Gas Men

**G**EORGE S. HAWLEY, president of the Bridgeport Gas Light Co., Bridgeport, Conn., and vice-president of the American Gas Association, was elected vice-president of the Chamber of Commerce of the United States, representing the Northeastern Division, at the twenty-ninth annual meeting of the Chamber in Washington, D. C., April 29-May 1.

Another utility man, James F. Owens, Oklahoma Gas and Electric Company, Oklahoma City, Okla., was named vice-president of the national Chamber representing the Southwestern Division.

Thomas J. Strickler, vice-president and general manager, Kansas City Gas Company, and president of the American Gas Association, is a director of the national Chamber of Commerce.

## Heads Chicago Chemists



E. A. Dieterle

**A**T the annual meeting of the Chicago Chemists' Club, Edward A. Dieterle, consulting gas and chemical engineer, with offices at 122 South Michigan Avenue, was elected President of the club for the ensuing year.

Upon graduating from the University of Illinois, Mr. Dieterle started work as assistant chemist for The Peoples Gas Light & Coke Company and later became assistant superintendent of one of their manufacturing plants. Among other positions held by him prior to his entrance into the consulting field were those of chief chemist, Seattle Gas Company; assistant chief chemist of the Koppers Company, with laboratories at Mellon Institute of Industrial Research, Pittsburgh, and chief chemist of the Chicago By-Product Coke Company, Chicago. He had an appointment as consulting gas engineer with the United States Bureau of Standards, Washington, D. C., during the last World War.

Mr. Dieterle has been active in a number of technical organizations and has

served as chairman of the Puget Sound Section of the American Chemical Society and as chairman of the Gas Engineering Section of the Western Society of Engineers.

## Miss Wagner Directs New Woman's Service Center



Jane Tiffany Wagner

**A**NATIONAL Woman's Service Center with headquarters in Chicago, which will offer services and guidance on every phase of the home, has just been organized under the direction of Jane Tiffany Wagner, nationally known home economist and former director of the home economics department of Servel, Inc. Designed to provide a closer tie-in between consumer and manufacturer, the new organization will get under way in the early Fall.

As outlined by Miss Wagner at a luncheon meeting in New York, May 6, the center will include a broadcasting studio, consulting offices, laboratories for product testing, food research laboratories, clothing, food and art units, as well as the "Home for New Ideas," featuring an all-gas kitchen and the latest developments in all phases of homemaking. Also, a daily half-hour homemakers' radio program over station WENR, Chicago, of the National Broadcasting Co., will broadcast authoritative information on home problems.

## A. G. A. Conference Resolution

**T**HE following resolution was unanimously adopted by the Conference of the American Gas Association Executive Board and Advisory Council in Cleveland on May 23:

"RESOLVED, that the thanks of the Conference be extended to J. French Robinson and his associates in The East Ohio Gas Company for their generous assistance in making this meeting a pleasant and profitable one."

## Niagara Hudson Elects Brett Controller

**G**EORGE J. BRETT, treasurer of western division companies of the Niagara Hudson System and assistant controller of Niagara Hudson Power Corporation, was elected controller of Niagara Hudson Power Corporation May 14, it was announced by Alfred H. Schoellkopf, president.

Mr. Brett has been connected with the electrical industry in western New York for the past twenty-four years.

## Westchester Lighting Co. Men Promoted

**H**ERBERT G. SCHAUL, formerly manager of the house heating division of the Westchester Lighting Co., Mt. Vernon, N. Y., has been promoted to the office of executive assistant to the general superintendent of the customers' service department. James E. Cook, manager of the architects' and builders' division, has succeeded Mr. Schaul as manager of the house heating division which also includes the architects' and builders' division.

Both Mr. Schaul and Mr. Cook have been active in domestic sales activities of the American Gas Association. Mr. Schaul was chairman of the House Heating and Air Conditioning Committee of the Residential Section in 1938-1939, while Mr. Cook has been active in the Home Appliance Planning Bureau's work.

## Goodwill Ambassadors



F. L. Fairchild, president of the Sprague Meter Company, and H. Ward Cheeseman, senior salesman, after their return from an extensive tour of South America where they conducted a business survey. Their trip covered 19,000 miles and included seven countries.

## Martha Jane Tupper Joins Servel



Martha Jane Tupper

**M**ARTHA JANE TUPPER, well known home economist formerly associated with The Brooklyn Union Gas Co., of New York, has been appointed director of the Home Economics Department of Servel, Inc., Evansville, Ind., it has been announced by George S. Jones, Jr., vice-president

and general sales manager of the company.

Mrs. Tupper has had well-rounded experience in the home economics field. She has held important teaching posts at New York University and at the Tennessee State Teachers College. She was also formerly associated with a national woman's magazine.

## Albert N. Woodhead Is Vice-President

**A**LBERT N. WOODHEAD was elected a vice-president of the New York Power and Light Corporation at a meeting of the board of directors held at Albany, April 29. This announcement was made by Otto Snyder, president, and follows closely Mr. Woodhead's election as a director of the corporation at the stockholders' meeting held April 17th.

Mr. Woodhead has been associated with the power company since 1926 when he went to Albany and soon after became assistant secretary. In that capacity he directed the company's advertising and publicity programs as well as matters concerning public relations. He will continue to supervise these activities in his new official capacity, Mr. Snyder stated.

## Boston Gas Sales Show Increase

**A**N attractively illustrated annual report to employees of the Boston Consolidated Gas Company, Boston, Mass., gives striking indication of the company's progress in 1940. According to the report which is signed by E. M. Farnsworth, president, total gas sales were up 3 3/4 per cent and appliance sales increased 12 per cent over 1939.

Outstanding new business secured during the year was the installation of gas cooking in all four new units, containing 3296 apartments, constructed by the Boston Housing Authority, while two of these units, containing 1964 apartments, adopted gas

refrigeration. Of particular interest to employees, was the fact that employee leads accounted for the sale of 1059 units during the year, an increase of 65 per cent over previous years.

In reference to greatly increased taxes which took considerably more than half the added net income, the report comments: "Like Alice and the Red Queen in 'Looking-Glass Land,' we shall have to run very fast to stay where we are now, and even faster to continue our forward financial progress."

## New Personnel Manager



W. R. Davis

**A**PPPOINTMENT of W. R. Davis as personnel manager of the Southern California Gas Company, effective May 1, has been announced by F. S. Wade, president and general manager of the company. Mr. Davis succeeds Guy W. Wadsworth, Jr., in this post. Mr.

Wadsworth recently was elected vice-president in charge of employee relations.

Mr. Davis became associated with the gas company in 1937 as personnel representative, and became assistant personnel manager the following year.

## Frederick F. Curtze Dies

**F**REDERICK FELIX CURTZE, chairman of the board of the Columbian Carbon Company, died at his home in Erie, Pa., on May 7. He was 83 years old.

Mr. Curtze was president from 1914 to 1940 of the Columbian Carbon Company. He also had been president and a director of the Coltex Corporation, Columbian Gasoline Corporation and Southern Gas Line, Inc., and a vice-president and director of the La Del Oil Properties.

Mr. Curtze was also president of the Union Iron Company, Heisler Locomotive Works, Erie Manufacturing and Supply Company, and the Erie Trust Company, all of Erie.

He had been a member of the American Gas Association from 1927 until the time of his death.

## Walter G. Rich Is Dead

**W**ALTER G. RICH, for 29 years manager of Southern Counties Gas Company's Whittier (California) district, died on April 20, of complications resulting from an emergency appendectomy.

## A. G. A. Prize Paper Contest Brings 500 Entries

**S**UBSTANTIALLY over 500 entries were received at the closing date, May 1, of the Prize Paper Contest on the subject "How I Would Increase Public Acceptance of Gas as the Ideal Domestic Fuel," conducted by the Committee on Personnel Practices of the American Gas Association, according to the Chairman, Roland S. Child of Poughkeepsie, N. Y. The entries represent 74 companies in 30 states and the District of Columbia and Canada.

The difficult task of judging has been started and President T. J. Strickler and Vice-President George S. Hawley of the Association will select the final winners of the \$150 and \$75 cash prizes. The winners will be announced at the convention in Atlantic City next October. In addition to the national prizes many of the companies awarded prizes for the best papers submitted by employees.

## New Type Connection for Gas Outlet



**A** COMBINATION gas outlet box and safety shut-off valve, which is built into the wall and is very similar in appearance to the familiar electrical outlet, has just been placed on the market. This new type of gas connection, known as the Gas-o-let, is designed to take the place of the old fashioned, protruding gas valve.

One of the important advantages listed for this new unit is the greatly increased safety which it provides. A patented locking device prevents the gas from being turned on unless the appliance is connected.

The Gas-o-let is designed to be a permanent part of the piping system. A substantial steel outlet box houses the forged brass valve, which is approved by the American Gas Association. A hinged cover hides the brass 3/8" male S.A.E. connection onto which gas heater and other appliances can be connected in the usual fashion.

It is a product of the Imperial Brass Manufacturing Company, 1200 West Harrison Street, Chicago, and is completely described in Bulletin No. 4-G just issued by this manufacturer.

# AFFILIATED ASSOCIATION *Activities*

## Pennsylvania Gas Association



P. T. Dashiell

THE gas industry must adapt itself to new conditions and meet them squarely in order to prosper, George S. Hawley, president, Bridgeport Gas Light Company, and vice-president, American Gas Association, told the Pennsylvania Gas Association at its thirty-third annual meeting in Skytop, Pa., May 12-14. Mr. Hawley was one of the principal speakers at the first evening session of the convention which attracted approximately 400 delegates.

Among the new problems mentioned by Mr. Hawley were: more rigid state and Federal regulation, how to increase the use of gas per family unit, competition from new sources, and increased responsibilities in connection with the national defense program. He urged the gas men to "deal with our neighbors, with our employees, our customers, our dealers, and the public generally, on the basis of the utmost fairness, frankness and good will."

### *Dashiell New President*

P. T. Dashiell, vice-president in charge of production, The Philadelphia Gas Works Co., Philadelphia, was elected president for the 1941-1942 term, succeeding M. A. Boylan of Scranton, Pa. Other new officers are: Vice-presidents—F. W. Lesley, York, Blackwell Newhall, Philadelphia, E. G. Boyer, Philadelphia; secretary—William Naille, Lebanon; treasurer—W. G. Sterrett, Jenkintown.

In his opening report to the convention, President Boylan stated that gas sales to Pennsylvania customers increased appreciably during 1940 closely following national averages. John F. Davis, of Reading, speaking at the same session, stressed the importance of national solidarity.

Prominent speakers at the two business sessions included A. W. Johnston, Jr., The Hartford Gas Co.; R. C. Holcombe, The Philadelphia Gas Works Co.; E. J. H. Flexer, Allentown-Bethlehem Gas Co.; R. D. Jones, Consumers Gas Co.; George

E. Webber, Public Service Electric and Gas Company; Dr. R. B. Mitchell, University of Pennsylvania; J. Edward Brewer, consulting chemist of Philadelphia; W. G. Murfit, The Philadelphia Gas Works Co.; Lyle C. Harvey, Bryant Heater Co.; George S. Jones, Jr., Servel, Inc.; and L. F. Demmler, Ketchum, MacLeod and Grove, Inc., Pittsburgh.

## Gas Meters Association of Florida-Georgia

TED BERGMAN, Florida Power & Light Co., Miami, Fla., was elected president of the Gas Meters Association of Florida-Georgia at the association's sixth annual convention in Hollywood, Fla., April 20-22. C. D. Littlefield, Peoples Gas Co., Miami Beach, Fla., was named vice-president and H. Stuart Johnson, Florida Public Service Co., Orlando, Fla., was re-elected secretary-treasurer.

## Mid-West Gas Association



H. E. Peckham

ident of the American Gas Association, made noteworthy contributions to the convention.

Harold E. Peckham, Northern States Power Co., St. Paul, Minn., was elected president for the 1941-1942 term. Other new officers are: first vice-president, H. K. Wrench, Minneapolis; second vice-president, Hal Gildersleeve, Lincoln; and secretary-treasurer, R. B. Searing, Sioux City.

Affiliated representatives appointed for the new year are: manufacturers' section—K. R. D. Wolfe, Marshalltown, Ia.; technical section—Lester J. Eck, Minneapolis; accounting section—E. H. Vieregg, Grand

Island, Neb.; commercial section—Hal Gildersleeve, Lincoln; industrial section—E. L. Fischer, Davenport.

Highlight of the convention program was the Cavalcade of Gas directed by Carl Sorby, George D. Roper Corp., and presented by a cast of 19. It covered the history and development of gas, early salesmanship, cooking, water heating, refrigeration, house heating and home service.

## Missouri Association of Public Utilities



B. C. Adams

BEN C. ADAMS, president and general manager of the Gas Service Co., Kansas City, Mo., was re-elected president of the Missouri Association of Public Utilities at the annual convention held in Excelsior Springs, April 23-25.

Other officers re-elected at the meeting were: first vice-president, D. W. Snyder, Jr., Missouri Power & Light Co., Jefferson City; second vice-president, C. A. Semrad, St. Joseph Railway, Light, Heat and Power Co., St. Joseph; treasurer, Harv Warner, Gas Service Co.; secretary, N. R. Beagle, Missouri Power and Light Co.; assistant secretary, Jesse Blythe, Jefferson City; managing director, E. A. Beer, Jefferson City. Joseph F. Porter, Jr., Kansas City Power and Light Company, was elected third vice-president.

In one of the principal addresses at the convention, Harry D. Hancock, president, Gas Advisors, Inc., New York, and chairman, A. G. A. Natural Gas Section, predicted an era of unparalleled material and cultural gains in this country through the continued growth of science and its application to our national economy.

It was one of the largest conventions in the association's history, a total of 270 delegates being registered. Many well-known speakers were on the three-day program.

## Wisconsin Utilities

LAWRENCE F. SEYBOLD, vice-president, Wisconsin Electric Power Company, has been unanimously elected president of the Wisconsin Utilities Association in a vote by mail, succeeding A. P. Gale, of Madison. At the same time, Edward R. Felber, vice-president and sales manager, Madison Gas & Electric Co., was named vice-president and Louis T. Smith, secretary-treasurer, Milwaukee Gas Light Co., was re-elected treasurer.

The new term of office began on May 1, 1941.



## Michigan Gas Association

A STRONG program of timely interest to the gas industry is being perfected for the annual meeting of the Michigan Gas Association which will be held jointly with the Michigan Electric Light Association at the Grand Hotel, Mackinac Island, June 30, July 1 and 2.

James E. McCarthy, dean, College of Commerce, University of Notre Dame, will be one of the principal speakers at the Monday meeting. His topic will be—"The Accounting Department and Its Responsibility to Management." Another speaker at this session will be Sarah M. Sheridan, vice-president, The Detroit Edison Company.

Addresses by President Fred P. Cope, Consumers Power Co., and Alexander Forward, managing director, American Gas Association, will feature the Tuesday session. Another program highlight will be a paper on "Sales Prospects Obtained by Employee Cooperation" by Walter L. Kurdelski, Michigan Consolidated Gas Company.

The annual report covering progress under the Gas Fellowship at the University of Michigan will be presented Wednesday by J. E. Spindle, chairman, Technical Committee, and Professors Alfred H. White and E. S. Pettyjohn of the University. Chairman Spindle will also present a review of the natural gas situation in Michigan. R. E. Townsend, former holder of the Fellowship, will discuss "A Case Study of a Gas Distribution System." Other topics to be handled at this session are: "Analysis of

Soil Conditions Prior to Installing Underground Pipes" and "Corrosive Conditions and Methods of Pipe Protection."

An enjoyable entertainment program is being arranged under the direction of Mr. and Mrs. Charles R. Henderson of Ann Arbor.

## Canadian Gas Association

W. J. PEAD, JR., chief engineer of the gas department, Montreal Light, Heat and Power Co., Montreal, Quebec, was elected president of the Canadian Gas Association at the Association's annual convention in Hamilton, Ontario, May 20 and 21. Other new officers are: first vice-president—Frank D. Howell, Dominion Natural Gas Co., Ltd., Brantford; second vice-president—Alan H. Harris, Jr., Winnipeg Electric Co., Winnipeg; secretary-treasurer (re-elected)—George W. Allen, 7 Astley Ave., Toronto.

Prominent speakers from the Canadian and American gas industries took part in the convention which was noteworthy in the value and character of the material presented, particularly as it related to the Canadian war effort. Among the speakers from this country were: Thomas J. Strickler, president, American Gas Association; R. M. Conner, director, A. G. A. Testing Laboratories; George L. Scofield, chairman, A. G. A. Domestic Range Committee; and Jessie McQueen, A. G. A. home service counsellor.

The following representatives were ap-

pointed on the Managing Committees of the American Gas Association: Accounting Section—G. R. Huxtable, Ottawa; Technical Section—J. D. von Maur, Toronto; Commercial Section—J. E. P. St. Jean, Montreal; Industrial and Commercial Gas Section—D. H. Thorburn, Hamilton.

The next annual convention will be held in Montreal early in June, 1942.

## Maryland Utilities Association

THE annual meeting of The Maryland Utilities Association was held at the Lord Baltimore Hotel, Baltimore, April 18.

Gas, electric and transportation groups held separate meetings, with recognized speakers discussing topics of special interest to each group during the morning session.

At the general session in the afternoon, addresses were made by H. S. Metcalfe, West Penn Power Company, Pittsburgh, Pa., and J. W. Purdy, Consolidated Gas Electric Light & Power Company, Baltimore, Md. A motion picture in color and sound, "People Come First" was shown through courtesy of the Baltimore Transit Company.

The following officers were elected for the ensuing year: president, R. L. Smith, Potomac Edison Company, Frederick; vice-president, Lewis Payne, Eastern Shore Public Service Company, Salisbury; treasurer, R. F. Bonsall, Con. Gas Electric Light & Power Company, Baltimore; secretary, Wilson Cook, Potomac Edison Company, Frederick.

## Indiana Gas Association

F. B. CULLEY, Southern Indiana Gas and Electric Co., Evansville, was elected president of the Indiana Gas Association at the thirty-first annual convention of the Association at French Lick, Ind., May 12 and 13. C. V. Sorenson, Northern Indiana Public Service Co., Hammond, was named vice-president and H. W. Thornburg, Central Indiana Gas Co., Anderson, was re-elected secretary and treasurer.

New directors elected at the convention are: C. W. Goris, Gary Heat Light & Water Co., Gary; R. S. Brunner, Indiana Gas Utilities Co., Terre Haute; and E. E. Linburg, Richmond Gas Corp., Richmond.

## James W. Barber Dies

JAMES W. BARBER, oldest employee of the Ruud Manufacturing Company and perhaps in point of continuous service, the oldest gas water heater salesman in the industry, died in Pittsburgh, Pa., on April 1, 1941.

Mr. Barber joined the sales staff of the Ruud Manufacturing Company in 1899 and for 41 years traveled the same territory,—Western Pennsylvania and Eastern Ohio.

## CONVENTION CALENDAR

### JUNE

- June 2-5 Edison Electric Institute  
Buffalo, New York.
- 3-5 Association of Gas Appliance  
& Equipment Manufacturers  
Ambassador Hotel, Los Angeles, Calif.
- 9-10 Pacific Coast Gas Association  
Northwest Conference  
Portland, Ore.
- 16-20 American Society of Mechanical  
Engineers—Semi-Annual  
Meeting  
Kansas City, Mo.
- 30-July 1-2 Michigan Gas Association,  
Grand Hotel, Mackinac Island, Mich.

### JULY

- July 7-8 Home Service Conference  
Syracuse University, Syracuse, N. Y.

### AUGUST

- Aug. 18-20 Appalachian Gas Measurement Short Course  
Morgantown, W. Va.

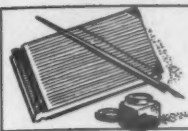
- 26-29 National Association of Railroad and Utilities Commissioners  
St. Paul Hotel, St. Paul, Minn.

### SEPTEMBER

- Sept. 8-10 Mid-West Gas School and Conference  
Ames, Iowa.
- 10-12 Pacific Coast Gas Association Annual Convention  
Del Monte, Calif.
- 11-13 American Trade Association Executives  
Hershey, Pa.
- week of 28 American Transit Association  
Chalfonte-Haddon Hall, Atlantic City.

### OCTOBER

- Oct. 6-10 National Safety Congress and Exposition  
Stevens Hotel, Chicago, Ill.
- week of 20 A. G. A. Annual Convention  
Atlantic City, N. J.



## Accounting SECTION

E. N. KELLER, Chairman  
LYMAN L. DYER, Vice-Chairman  
O. W. BREWER, Secretary

# What Features of a Utility Service Are Considered Arbitrary by the Customer?

By GEORGE A. SAAS

*Citizens Gas & Coke Utility,  
Indianapolis, Ind.*

THE answer to the above question, gentlemen, is: Every blessed one of our service habits will look arbitrary to a customer at one time or another—and there just isn't any sure-fire remedy.

Thus—quickly disposing of our subject, we can settle down to a ten-minute look at the consequences of being considered arbitrary—and to the drawing of a few conclusions.

To clarify the atmosphere a little, I'd like to refer here to a nation-wide survey conducted recently to find out what the public thinks of utilities. It was found that the public looked upon a utility in three different and distinct ways. There was the buyer and seller relationship, having to do with rates and prices—the relationship of a neighbor, having to do with courteous treatment—and third, the public sized up utilities on the basis of good citizenship. In this connection, it was definitely proved, that courtesy counts for more with the public than do lower rates, that the public has very definite ideas as to which utility gives it the most or least courteous treatment, and that such treatment is closely allied in the customer's mind with his estimate of the good citizenship of utilities.

### Spotlight on Customer Relations

This survey clearly focused a spotlight on customer relations by pointing out the importance of courteous treatment of customers, illustrating factually the far-reaching consequences in the public mind of discourteous treatment.

This assignment, of seeking out utility practices considered arbitrary by the public throws an interesting side light on the question of courtesy.

The science of semantics analyzes the meaning of words. It is a fact that any given word does not mean the same to everyone who hears it. The word "courtesy" has different meanings to different people and is translated always into personal experiences. Thus "courtesy" to the public has a broad meaning going beyond such common evidences of courtesy as "please" and "thank you."

The first fact that came to light in the effort to find what features of our service seem arbitrary to customers was that to

customers the word "courtesy" was synonymous with "satisfaction." Those who were satisfied in their dealings with the utility considered, in most instances, that they had been courteously treated or had no comment to make on the subject. Those who were dissatisfied with the results of their utility contact, those who felt they were the victims of an arbitrary attitude or rule, practically in all cases had a comment to make on the discourteous treatment they received.

### Courtesy Plays Big Part

Thus—if the contention, that courteous treatment is closely allied in a customer's mind with his estimate of a utility, is correct—and there is every reason to believe it is—courtesy is of paramount importance in public relations. If attitudes or rules considered arbitrary by our customers cause dissatisfaction and that dissatisfaction becomes synonymous in the public mind with discourteous treatment—this short study is worthy of considerable thought.

To find out what features of utility service were considered arbitrary by customers, it was necessary to make a survey. Having no desire to marshal our own utility's customers to arms, or to remind them of things which are better forgotten, the survey was neither large nor scientific. It was casual. Case histories were collected from other cities, from a few of our own customers, and from employees of public contact departments.

While the number of interviews was too small to indicate nationwide trends in customer thinking, the answers began to follow a definite pattern early in the survey. This pattern was all the more interesting when note was taken of the vehemence with which instances of arbitrary attitudes were related to the questioner. Almost half of all the complaints charging an arbitrary attitude on the part of utilities concerned company rules and policies, and the feeling with which such instances were related seemed more intense.

Inasmuch as this study looks at utility practices strictly through the customers'

eyes, with no attempt to excuse or justify seemingly arbitrary practices, it seemed advisable to group complaints into five divisions as the customer would divide them. Thus, these complaints were separated under headings of: "General Rules and Policies," "Appliance Merchandising," "Customer Handling," "Service Habits," and "Rates."

Of the cases tabulated, 44% dealt with "company rules and policies," 20% of them grew out of "appliance merchandising" practices, 17% of the complaints had to do with the physical elements of "customer handling" in the office, 14% with "utility service habits" in the customer's home, and only 5% of the cases tabulated were complaints arising out of a question of "rates." It is rather an illuminating situation: 5% considered rates, or something about them, arbitrary—while 44% of the complaints branded "arbitrary" various rules and policies of the company. Probably a left-over of the era when the stock answer to the average customer's protest was: "I'm sorry mum, but *that's our policy!*"—in the tone of "Boil him in oil" or "To the lions with him!"

### Specific Complaints

Would you like to hear a few of the specific complaints? Things your customer and mine consider arbitrary practices? Well, here goes, but keep in mind that we, at the moment, are not trying to justify or excuse any of these practices, we are looking at them through the customers' eyes—and right or wrong from our own standpoint—they look arbitrary as—well—they look arbitrary to customers.

—A few customers (5% of the number investigated) considered that rates are arrived at arbitrarily, that the utility is charging just what the traffic will bear. Complaints on this score can usually be traced to a previous high-bill complaint; rarely is the customer in possession of accurate comparative rate data.

—Promotional rates come in for a great deal of loud criticism—if the customer can't qualify. In the case of Indianapolis, for instance, two major gas burning appliances are required in addition to the gas furnace, or one other major appliance with a \$5 minimum charge to earn the gas house-heating rate. Those who cannot qualify with two appliances definitely consider such rates arbitrary.

Address before Joint A. G. A.-E. I. Accounting Conference, Cincinnati, Ohio, April 6-9.

In the case of utility service habits that irritate, (14%), a number of, perhaps, very necessary procedures are considered arbitrary rules by customers.

—Average charges are often established by utilities for certain service functions such as a charge for connecting a range. Such average charges are established as fairly as possible, yet being averages are bound to be unfair at times. Often the charge looks, and is, arbitrarily high to the customer whose range connection was simple, taking only about 10 minutes.

—In some utilities service men are permitted to do only work prescribed by the work order, but it may seem very arbitrary to the customer, if two able-bodied men, sent out to adjust an Electrolux can't adjust the burners of a gas range on the same trip—if this latter work doesn't appear on their work ticket.

—In one city from which case histories were collected there is a rule that no appliance may be connected within five feet of the gas meter. Now if the meter is located in the kitchen and the customer's new stove does not fit in the old spot, but does fit under the meter, it cannot be connected, unless the meter is moved. All of which is just dandy—but the customer has to pay for moving the meter! Arbitrary from a customer's viewpoint? You explain it!

#### Physical Elements of Customer Handling

Now for a fair sample of the type of complaints collected on the physical elements of customer handling (17%) which look arbitrary to the common people:

—The inability of the customer to pay a bill after office hours—no provisions made for a night depository.

—No information clerk on the main floor, resulting in improper directions given to the customer.

—Not enough clerks to wait on customers during rush period resulting in a line-up and unnecessary waiting.

—Cashiers not permitted to accept partial payments on a gas bill. Never mind justifying such a procedure, put yourself in the customer's shoes. You won't take his money. No sir—he has to go upstairs to the second floor, wait in line perhaps, then a clerk just like the cashier will say: "OK—if that's all you've got," he is sent downstairs with a slip and can stand in line again at the cashier's window. Take a good look at that fellow. He is articulate. He belongs to two clubs, is active in his church, has a habit of writing letters to the editors—and he votes!

—Or take the situation that arises where customer contact clerks sit in the same office with clerical workers. We'll say two clerks wait on customers, the others are not supposed to—and don't. Can the customer tell the difference by looking? No indeed. They all look alike to him and it's arbitrary as all get-out that he has to stand and wait while other clerks at desks won't wait on him.

The fourth group of complaints (20%) that fall in the "arbitrary" class arise out of merchandising practices:

—A customer buys a range and doesn't want the payments to appear on his gas

bill. Such a request is possible and even reasonable. He wants a little book, with a record, showing just what he paid and what he owes. But does he get it? No indeed, the policy is that appliance payments appear on the customer's bill for "his" convenience. And like it or not that's just where they'll appear. Now you may argue that handling one customer one way and the other customer another way is too much trouble. Perhaps it is, but such an attitude still looks arbitrary to the customer.

—The appliance salesman says: "Your first payment will be due in 30 days—and it will be on your gas bill, nice and convenient." But the customer is in a meter reading district due in about 15 or 20 days—and the first payment is on his bill—in 15 or 20 days—not in 30, like he was promised. If he complains—he is told: "That's our policy." It looks pretty arbitrary.

—The customer requests specific hours of delivery—"nothing doing."

—The legal appliance sales contract calls for customer liability in case of fire and the customer doesn't like it. "Can't do a thing about it, lady."

—Customer wants to see a range come out of a crate and wants it delivered that way. "Sorry, we test each appliance first, you'll have to take this one or none."

#### Company Policy and Rules

Now, we come to the fifth group of complaints. 44% fell into the category of: "Company policies and rules." Here are some fair samples:

—The customer considers it arbitrary that his credit standing in the community means nothing to the gas company. You want gas? OK—leave a deposit or have a guarantor card signed.

—Your boss may be no good as a guarantor if he lives out in the country and doesn't use gas, even if he is a bank president. Guarantors must be gas users, although why that is a credit recommendation, nobody knows. —No, you can't get your deposit back even if you have used gas for 20 years and discounted every bill.

—No, if you move you must have a new guarantor card signed, the old one is no good. The fact that you paid every bill right on the nose for 10 years doesn't mean a thing.

—Call a penalty a discount and it's OK to make the difference between net and gross 10% or 12%. Looks pretty high to a househeating customer.

—Sure your estimated bill is high—that's so you'll be certain to make arrangements to have your meter read. The fact that you've told two of your bridge clubs that you had a higher gas bill during the month you were in Florida than when you were home is of no interest to us.

—Why allow two discount misses—why not one, why not three?

—Oh that? That's just a routine collection notice lady, we send them to everybody after 60 days. Yes, I know you've paid all your bills before. How are we to know your husband was in the hospital with pneumonia?

—You want your meter somewhere else than in a customary location? Like near a window or outside of a recreation room? Try and get it without an extra charge!

And so on, practically indefinitely. The customer is told what he can or cannot do.

And, the customer buys a nice big label with the word "arbitrary" on it, and slaps it on the utility's back.

Employee relations, customer relations, merchandising practices, and public relations are all tied together. We, of the customer relations committee, are concerned only with one phase of building good will, yet—our aims must and do fit into the broader aims of good public relations. We are striving to put our best collective foot forward.

In our appraisal of practices from a customer relations viewpoint we must look beyond the stop-watch and questions of pure operating efficiency. We must remember that costs and percentages mean something only in relation to other costs and percentages. Thousands of dollars are spent wisely and carefully by each utility under the heading of promotion, new business expense or advertising—just to make friends, to build a load, to add a customer. The sum of money spent per new customer is large! Isn't an old customer worth at least as much? Surely, holding and satisfying an old and valued consumer is just as important—if not more so.

It is of tremendous economic importance to us, what the public thinks of our service and of our methods of customer handling. This isn't an age of rationalization, but an age of intense feeling—an age of passionate slogans, an age of firm opinions often expressed violently. Customers don't "think"—they "feel." Customer handling practices must be broad enough to recognize that impressions are lasting, that unless the customer feels he has been treated fairly all our efforts have failed. The label of "arbitrary" is deadly. High rates may be lowered, but once the "arbitrary" label is stuck on us, we're stuck with it.

#### Don't Treat Customers Like Sheep

The remedy? Of course there is one. It's simple too! Don't treat customers like sheep, like unidentified numbers—treat them like individuals.

Customer handling cannot be written up in Standard Procedure No. 1,893. The general outline of the procedure—yes. But individual cases—no. You say you can't make exceptions? Why not? It would cost too much? How much? And how much in relation to the sales department's new business expense? Every single item of customer handling expense as well as every single item of savings in procedure, must be viewed in the light of its relationship with other expenditures made on behalf of good public relations. No one department of a utility can stand alone. Certain it is, that in the customer's mind a utility is an entity—not a group of departments and divisions. Cutting the number of requests for duplicate bills in half—may save money. But if such saving was accomplished by making it so inconvenient for the customer, that he is discouraged from coming near the utility when he forgot to bring his bill downtown, it is a false saving indeed.



Friendly education of customers in the whys and wherefores of certain company rules and an honest appreciation of the customer's individual problem is absolutely essential for successful customer relations. The term education is not used in the sense that the customer is wrong, because he doesn't know, and so, he must be taught to know better. By education is meant elucidation—a clarifying of company policy by patient and friendly explanation. People are inherently honest and friendly. They fight only when they think it's necessary to win a point. Treat them as individuals, make it possible for them—within reasonable limits—to get what they want, and you'll find that they will rarely want anything you can't give them. Those who are

professional deadbeats or trouble makers—treat them as individuals too.

To catch flies you use sugar, not vinegar. To sell people you cater to *their* desires, not your own. To rise to near perfection in customer relations—you must have the customer's interest genuinely at heart. Do you like the liquid music of a saxophone? Or are you one of those who prefer the clear, vibrant tone of a cello? Now,—did you ever hear the mating call of a moose? It is the most gosh-awful sound you ever heard. But to the moose—it's the sweetest music in the world. If you want to catch a moose, gentlemen, you must forego the sounds *you* like. You must make a noise like a moose.

which Mr. Dyer presided. In this open discussion, questions were asked and answered on the subjects presented in the talks and papers presented in the morning session, as well as accounting subjects such as "Unaccounted for Gas," "Centralized vs. Decentralized Accounting," "Accounting Personnel Problems During Military Training Period," "Standardization of Reports and Forms" and "Payroll Accounting Methods."

At the close of the open discussion, the meeting was turned back to Chairman Hull, who thanked the speakers for the interesting papers presented and expressed his appreciation to the various committee members who assisted in preparing the program.

## Accounting Developments Aired at Convention



L. L. Dyer

**A**PPROXIMATELY 125 gas utility accountants attended the Accounting Conference during the Natural Gas Section convention in Dallas, Texas, May 6. Robert E. Hull, chairman of the Southwest Regional Committee of the A. G. A. Accounting Section, presided at the conference.

Following the opening remarks of welcome by Chairman Hull, E. N. Keller, chairman of A. G. A. Accounting Section, Philadelphia, Pa., presented an interesting talk on "Cooperative Work Pays Dividends." Mr. Keller pointed out the many advantages gained by the full cooperation of the various members, sections, groups or departments and stressed the point of the need, more especially at this time, of cooperation and coordination among personnel of the utilities.

J. H. Winbery, accountant, United Gas Company, Shreveport, La., presented a paper on "Plant Accounting and Records," pointing out several interesting matters on governmental control of plant records of the utilities and the problems arising out of the various rules and regulations under which the plant accountants were compelled to operate.

E. A. Steinberger, plant accounting engineer, Lone Star Gas Company, Dallas, presented a paper covering the subject of "Original Cost Determination." Mr. Steinberger's discussion covered mostly the problems now facing the natural gas companies affected by the Federal power Commission's Order No. 69, requiring utilities to reclassify plant property in accordance with the Uniform System of Accounts as prescribed by the Commission, made effective January 1, 1940.

The last speaker of the morning session was I. M. Avent, United Gas Pipe Line Company, Shreveport, La. Mr. Avent's subject was "Accounting in Taxation," in which he discussed two plans of tax departments—the small department working with information furnished by other departments and the large department working all of its own basic information. He pointed out the increased work and importance of tax work because of higher tax rates, enlarged number of taxes and further complicated tax laws and regulations.

### Increasing Importance of Accountant

Following the morning session, L. L. Dyer, vice-chairman, A. G. A. Accounting Section, and comptroller, Lone Star Gas System, Dallas, presided at the luncheon and acted as the principle speaker. The main subject of Mr. Dyer's talk was "The Increasing Importance of Accounting and the Accountant." Mr. Dyer pointed out the important responsibilities and the constantly increasing demands being made upon the present-day utility accountant and stressed the important part the accountant should play in the management of a company's business and the need for close cooperation in working with the management of the company. Mr. Dyer also brought out that the present day accountant can no longer be compared with the accountant of even the last decade and is no longer considered simply as a bookkeeper. He closed his remarks by stating that the working tools of a utility accountant today were a thorough knowledge of the company's business, including financing, budgeting, consolidation and acquisition of property. Also he acts as counsel to management and, therefore, must have a clear understanding of Federal, State, City and County regulatory commissions' requirements, reports and statements.

At the conclusion of Mr. Dyer's talk, a general open discussion was held during

## Post-War Gas Appliance Standardization

(From editorial in *Gas Journal*, London, March 26)

**T**HEN there is the question of appliances. The enormous building program that must be carried out after the war, both as regards private houses and commercial and industrial premises, will call for more appliances than the industry, under existing conditions, is likely to be able to produce in the time required. The Ministry of Works has its own director of Standardization, and a list of standards has been prepared, including among many other items, gas-heated ranges, ovens, fish fryers, water heaters.

Standardization has never been a popular idea in the gas industry, which, while always striving for the best, has been ready and anxious to encourage new ideas, no matter from what quarter they came. But post-war conditions will find the country in a difficult position as regards cost of manufacture, acceleration of output, and supply of materials, and it is to meet these conditions that standardization is finding favour with the Ministry of Works.

A good many things besides gas appliances will be standardized, but it does not follow that people will have to live in absolutely identical houses or work in standard offices and works. There will have to be mass production, but not the sort that has given the term a bad name in the past. The idea behind the Ministry's move toward standardization is to raise the standard rather than to bring it down to a lower level, and to make the appliance, whatever it may be, harmonize, as regards quality and efficiency, with the generally higher standard of building which it is hoped will take the place of the present ruins.

The gas industry, in general, has much to gain and nothing to lose by devoting some attention now to the changed circumstances it will have to face when peace returns.



# Residential SECTION

R. J. RUTHERFORD, Chairman  
E. J. BOYER, Vice-Chairman  
J. W. WEST, JR., Secretary

## Dramatic Cavalcade of Gas Centers Attention on Residential Sales Program

WITH a minimum of the commonplace and a maximum of the dramatic and unexpected, the Residential Gas Sales Conference at the annual Natural Gas Section convention at Dallas, Texas, May 5 and May 6, drove home the finer points of enlightened gas selling practice and presented the coordinated four-pronged national cooperative domestic sales program sponsored by the American Gas Association. Adapting the technique of the stage and Hollywood, a swift-moving Cavalcade of Gas presentation with a large cast, proved a highly effective and entertaining method of attracting attention to the house heating, water heating, refrigeration and CP range sales activities.

F. M. Rosenkrans, new business manager, The Gas Service Co., Kansas City, and chairman of the Residential Gas Sales Committee, presided at both sessions of the well-attended conference. The opening meeting featured an address by Paul Taylor, vice-president, Stone & Webster Service Corp., New York, a symposium covering executive viewpoints on organization and sales promotional methods, and a movie devoted to the latest developments in sales approach.

"Look Homeward!" was the succinct mes-

sage that Mr. Taylor conveyed to the residential sales promotion men in a provocative address. The family is still the stable unit of society and, as such, merits the full attention of the gas industry executives, Mr. Taylor pointed out. "The fact that thousands of families are availing themselves of the opportunity to build homes of their own, to rent the units of governmental housing developments and to become tenants in the numerous rental projects made possible by private capital, leads us to believe that the family continues to be a social unit which must be considered the most important unit with which retail business has to deal," he said.

### Utilities Aid Housing

Mr. Taylor asserted that a major part in the development of modern housing had been played by the public utility companies. Working hand in hand with the manufacturers of household equipment, "they have impressed the business world with the convenience, and ease with which gas, electricity and water have been put to work in the modern home."

Calling the residential load the backlog of every gas company, Mr. Taylor said: "Most of us strongly realized the importance

of the load within the home during the depression, less than 10 years ago. We saw industrial gas business fade overnight; we saw the demand for drilling gas curtailed sharply; we saw the necessity for cutting costs at every corner, but we also saw the residential load hang on." He urged natural gas company executives to keep alert and well posted on the work their departments are doing for the home and the householder.

### Management Must Support Sales

No type of industry, especially the gas industry, can succeed whose management is not in full sympathy and accord with the promotion of sales, J. French Robinson, president, The East Ohio Gas Co., Cleveland, and vice-chairman, Natural Gas Section, declared in an inspiring address during the executive sales symposium. "Our business may begin in the field, but it ends in the gas appliance," he said. "And when it fails to get to the appliance, it ends short of a successful gas company. Sales, therefore, are the whole business of the company—and of the whole company, from top to bottom."

Indicative of the trend in natural gas sales, Mr. Robinson pointed out that in 1920 there were 2,615,000 natural gas cus-



The cast of the Cavalcade of Gas lines up after the presentation of this outstanding feature of the natural gas convention. Representing all phases of the domestic gas business, the characters gave a fast-moving performance that dramatized the national gas cooking, water heating, house heating and refrigeration sales campaigns. Highlights of the show were the Cavalcade of Gas song to the tune of "Beer Barrel Polka" and cleverly written skits with strong selling themes.



F. M. Rosenkrans, chairman, Residential Gas Sales Committee, congratulates E. C. Sorby, Geo. D. Roper Corp., on his superb performance as Master of Ceremonies of the Cavalcade of Gas

tomers in this country with an annual average consumption of 109,400 cubic feet per consumer; in 1930 there were 5,752,900 consumers and the annual consumption per customer had dropped to 60,500 cubic feet per consumer; in 1940 with 7,156,700 consumers, the average annual consumption per consumer was 68,800 cubic feet per consumer. He urged each company to get its own figures and use them as an indicator or sales meter. It is the executive's responsibility to watch that indicator and understand why the figures are what they are, he stated.

While the executive cannot follow the myriad detailed and personalized relationships of manufacture, dealer and customer, he can follow broad general principles which are based on his knowledge of the facts, Mr. Robinson brought out. "He can check his particularized sales forces for results and the practices which they employ. They are in the woods at close dealings with the forces which oppose the use of their product and only the executive is in a position to see the forest."

The executive can best discharge his responsibility to sales in two ways, Mr. Robinson asserted: "First by his own example—the emphasis which he himself visibly and sincerely and infectiously puts on the importance of sales; and second, by seeing to it that all employees are schooled in the superiority of accepted modern gas appliances, and schooled also in their part of the sales picture."

As the chief salesmen of their company, "in a great measure their public utterances of executives, whether from the platform or in the newspapers, sell their company and the service that their company has to offer. Hence the responsibility of an executive to understand the appliance end of the business."

Declaring that most business is done, first on the basis of merit of the product, and second on friendship, he said, "There is no question as to the merit of our product. The amount of friendship between our dealers, distributors and contractors, and ourselves depends in a large measure on ourselves, and this friendship depends, in the main, on how close and friendly the contacts between the gas appliance dealers and ourselves are."

Mr. Robinson concluded that "the executive responsibility for sales in a metropolitan gas company is—GAS SALES."

E. J. Stern, vice-president, Public Utilities Corp., Atlanta, Ga., followed Mr. Robinson's discussion of executive sales responsibilities in a large metropolitan company by covering the same subject from the viewpoint of urban service areas. His address gave valuable information on the sales activities and executive direction of his company and was punctuated with enlightening descriptions of outstanding sales records of individual salesmen.

#### All-Star Cavalcade of Gas

The Cavalcade of Gas which occupied the entire second session of the Residential Gas Conference was one of the highlights of the entire convention. Cleverly acted and masterfully directed by E. C. Sorby, George D. Roper Corp., who as master of ceremonies was largely responsible for the success of the show, this event was staged with precision and showmanship that kept the audience in a constant state of wonderment and enjoyment. The scope of the presentation may be judged from the following program of events and characters:

Let Freedom Ring—Colonial Character, Charles Rogers, Dallas, Texas.

#### 1. PRESENTATION OF "MASTER CRAFTSMEN," E. C. Sorby.

"Master Craftsmen," C. C. Young, Dallas Gas Company, Dallas, Texas; Earl Brown, Dallas Gas Company, Dallas, Texas. "Father Time," E. C. Watkins, Dallas Gas Company, Dallas, Texas.

#### 2. HISTORY AND DEVELOPMENT OF NATURAL GAS, F. M. Rosenkrans.

#### 3. "THE OLD SALESMAN," Lloyd C. Ginn, Advertising Manager, American Stove Company, Cleveland, Ohio.

#### 4. "THE WAY TO A MAN'S HEART"—CP Range Presentation.

Jewel Hensley, home service director, The Gas Service Company, Topeka, Kansas; Adelle Morgenson, home service director, The Gas Service Company, Bartlesville, Oklahoma.

#### 5. "HOT AQUACADE"—Water Heating Presentation. Organized by J. H. Warden, sales manager, Oklahoma Natural Gas Co., Tulsa, Oklahoma.

Characters: "Miss Gaye Nyntees," "Miss Moderne Aqua Belle."

#### 6. "A GAS HEATING PROBLEM." Organized by the House Heating Committee, A. G. A. J. G. Tooker, Chairman, new business manager, written in poetry by Tooker, The Gas Service Co., Wichita, Kansas.

Characters: John Homebuyer—Fred Karr, manager, The Gas Service Co., Topeka, Kansas; Factory Representative—R. Lewis Towne, sales promotion manager, Surface Combustion Corp., Toledo, Ohio; Dealer—Keith Davis, Mueller Furnace Company, Milwaukee, Wisconsin; General Manager, Gas Company—A. W. Lundstrum, Ebasco Service, New York, N. Y.

#### 7. GAS REFRIGERATION, R. J. Canniff, sales promotion manager, Servel, Inc., Evansville, Ind.

#### 8. GRAND FINALE. Acknowledgements: Stage setting for "Cavalcade" loaned by Mid-West Gas Association.

The presentation ended appropriately with the Cavalcade of Gas song to the tune of "Beer Barrel Polka":

Roll up the volume,  
We've got the gang on the run;  
Push Gas Performance,  
We'll show them how it's done.  
Gas—Fuel—Promotions  
Promise more wonderful years,  
Now's the time to sell performance  
And keep the load right here.



Albertine Berry, chairman, A. G. A. Home Service Committee, and home economics director, Lone Star System, with the Plainsmen Quartet and Cecil Hale, announcer, during the broadcast of the Modern Homemaking Program over WFAA at Dallas—a feature of the Home Service Luncheon at the natural gas convention. (Story on next page)



## Texas Atmosphere Pervades Home Service Luncheon at Dallas

TEXAS hospitality was evident at the Home Service Luncheon presented during the annual convention of the Natural Gas Section of the American Gas Association in Dallas on Tuesday, May 6.

The home service "chuck wagon" was announced with gay posters throughout the convention halls, and the serving was done against a chuck wagon background. Floral decorations included the native Texas blue-bonnet and Indian paint brush, and additional Texas atmosphere was embodied in the music presented by the Cass County Kids, a trio of singing cowboys who sang Texas songs. This latter feature was presented for the occasion with the compliments of the CP Range Sales Promotion Committee of the A.G.A.E.M. as were also

a group of rope-throwing cowgirls performing in different corners of the luncheon room. Colored crayon sketches illustrating the songs by the cowboys were presented by Mrs. Elmer Harris, a well known sketcher in Dallas.

Albertine Berry, a native Texan and chairman of the A. G. A. Home Service Committee, presided at the luncheon, and at the request of F. M. Rosenkrans, chairman of the Residential Gas Sales Committee, presented an actual reproduction of the radio program given weekly by the Lone Star Gas System to reach customers throughout the wide territory served by this company.

An interesting surprise feature of the Home Service Luncheon program was the presentation of awards to two winners in

the recent Servel High School Contest. Thomas J. Strickler, president of the American Gas Association, presented Louis Ruthenberg, president of Servel, Inc., who made the awards to the Texas state winner, LaVerne Hawkins of the Woodrow Wilson High School in Dallas, and to the southeastern regional winner of the contest, Caroline Evans of the Meridian High School, Meridian, Miss.

To each high school represented through its teacher of home economics, Servel announced the presentation of a Servel Electrolux refrigerator for use in the home economics classes. The two people from Meridian were sent to the convention as guests of the Peoples Water and Gas Company at Meridian, Miss. Through the period of the Convention the student winners and the teachers were guests of Servel, Inc.—one feature of the entertainment including a complimentary trip on one of the new airliners between Dallas and Fort Worth.

## Weekly Homemaking Radio Program Is Dallas Convention Feature

ON the Air! . . . The Modern Homemaking Program of the Lone Star Gas Company, a weekly broadcast over WFAA at Dallas, Texas, with Albertine Berry, the Plainsmen Quartet, and Cecil Hale, announcer is a highly successful gas promotional feature. At the 1941 Natural Gas Convention in Dallas, this group gave one of its programs on the stage at the Home Service Luncheon, a program with Mexican recipes, and with dialogue about traveling in Mexico. (Photograph on preceding page.)

Miss Berry, home economics director of the Lone Star System covering 301 natural gas towns in Texas and Oklahoma, has been giving food news and kitchen fashions on this fifteen-minute broadcast since 1934. The program announces the weekly illustrated Recipe Bulletin which is given away at the company offices on the Lone Star System, and today this bulletin send-out is 19,500 copies, with about half of them going to those high schools and colleges which have asked for the bulletins. Last summer when the Home Economics Department got out their own Canning Booklet (illustrated, on slick paper), and advertised it only by radio, the radio audience picked up all 30,000 copies in four or five weeks.

The program is designed to interest the women, with practical ideas and methods for easier cooking and housekeeping, and with a regular but not too heavy an emphasis on gas equipment. Miss Berry gives a menu, two recipes, and a discussion of some cooking process or short-cut. Opening with the light conversation of Miss Berry, Mr. Hale, and Lois Upshaw (who

is Miss Berry's "visitor," and who writes the broadcast), the program usually brings in some happenings in Dallas, the Southwest, or anywhere in the world, and often uses the real names of people concerned therein.

## Servel Announces Winner in School Food Project

GRAND national winner in Servel's Second High School Food Project to promote practical knowledge among the youth of the nation of the role which modern gas home refrigeration plays in food purchasing, preservation and preparation, is 17 year-old Mae Lee Dow, of Central High School, Grand Rapids, Michigan. High school home economics students in twenty states are receiving national, regional, and state awards in the project, conducted by the Home Economics Department of Servel, Inc., Evansville, Ind.

Miss Dow will receive a summer vacation, all-expense trip to the West Coast with her home economics teacher, Miss Carmen Mains, and Miss Lucille Hall, home service director of the Michigan Consolidated Gas Co., Grand Rapids, Mich.

Miss Hall's award from Servel is a special feature in recognition of her enthusiastic promotion of the High School Food Project plan in Grand Rapids, where 1,100 students entered a city-wide project for utility and Servel awards.

Four national winners are each receiv-

ing a \$100 cash college scholarship award. Their school laboratories are being presented with a gas refrigerator. These are all in addition to other state and school awards being made.

The national winners are:

Marion Genung, McKinley High School, Washington, D. C.; Carolyn Evans, Meridian High School, Meridian, Mississippi; Irene Akin, Kiowa High School, Kiowa, Oklahoma; Norma Youngberg, McMinnville High School, McMinnville, Oregon.

First announcement of the project winners was made by Louis Ruthenberg, president of Servel, Inc., at the Home Service luncheon of the recent Natural Gas Convention in Dallas, Texas.

Home Service Directors and sales managers will have the opportunity to view award-winning project reports which will be sent to interested utility executives on request to the Home Economics Department of Servel, Inc., at Evansville, Ind.

## Chicago Gas Refrigerator Sales Up 119%

AS a result of the "60-day Proof of Superiority Offer," sales of gas refrigerators by dealers of The Peoples Gas Light & Coke Co., Chicago, since March 1 are 119 per cent ahead of the corresponding period last year.

The 60-day offer calls for a small down payment by any prospect who can observe the efficient operation of the gas refrigerator for 60 days without making any further investment. At the end of that time, if the service of the refrigerator is unsatisfactory the customer is under no obligation to keep it.

Records show that very few have been returned.

# 7% of Customers Install Automatic Water Heaters in One Year

By C. F. FUNDINGER

*General Manager, Pavilion Natural Gas Co., Geneseo, N. Y.*

**D**URING the year 1940 seven per cent of our customers installed automatic water heating equipment. In accomplishing this, the following plan was carried out.

In the spring of 1937 this company changed over from serving a mixed gas to a straight natural gas, at which time we changed to a therm method of billing and made a reduction of 12 per cent in our rates. In addition, a promotional type of rate was made effective for persons using an automatic gas-fired water heater as the sole means of heating water. During the next three years our efforts were centered largely on building up our house heating load, starting from scratch, and using the off-season periods for water heating sales. Having the same salesmen working on all classes of merchandise naturally meant that our water heater sales were not what they would have been with more time available for this work.

## Saturation of 24%

In spite of this we were able to increase the water heaters on the lines from 399 in May of 1937 to 796 on December 31, 1939, and during 1940 when most of our efforts were put in this work, we added 339 automatic jobs on the lines, so that at December 31, 1940, we have a saturation of 24% of the domestic and commercial customers. Of the total of 339 heaters placed on the lines in 1940, dealers accounted for 44, and there were 66 existing tanks converted to automatic operation. In order to interest those customers in the lower income bracket and those renting homes we used a slow recovery conversion unit, and the surprising thing with the converted heaters is that in practically all cases of tank failure the customer is easily sold a new automatic water heater.

During January and February of 1940 we made a complete survey of our customers. Then we made up statements of consumers not using automatic water heating, showing the previous year's gas consumption and cost, compared with the cost of the same amount of gas under our water heating rate, which averages 14 cents per therm for the water heater consumption.

This statement was made up in letter form, and mailed to customers at intervals. The salesman followed in several days with a call and copy of the letter, and usually was cordially received because the letter showed the customer how a lower rate could

be obtained and paved the way for the salesman.

One of the best helps in selling heaters was a small notice stamped in red ink on monthly bills stating "saving under special water heating rate for this amount of gas is \$——." Many customers after seeing this stamped on their bills month after month would come in to the office and inquire as to its actual meaning, and as a consequence many sales were thus consummated.

Water heaters were installed on a thirty-day free trial and our total reverts were less than three per cent. We have thus been able to eliminate many furnace coils, jack pots and tank heaters, and have in this way converted many customers to using gas for water heating twelve months in the year instead of only five or six months. The additional load thus created is offsetting the loss in revenue from the lower rate. It has also made for better public relations by having satisfied customers that are gas-minded with a twenty-four hour hot water service. We are continuing our efforts in 1941 and it bids also to be a good year for water heaters.

## Best All-Gas Kitchen Wins McCall's Contest



*Prize-winning all-gas kitchen*

**T**HE special prize for the best all-gas kitchen submitted in the kitchen planning contest conducted by *McCall's Magazine* was awarded to Mrs. Arthur A. Frick of Pasadena, Cal. Mrs. Frick's kitchen was pictured in color in the May issue of *McCall's*. It is shown in the accompanying drawing.

In addition to specifying a gas range and a gas refrigerator, Mrs. Frick included in her kitchen a counter dinette or breakfast bar, as a continuation of the regular work surface over the cabinets. This counter dinette takes up almost no space and yet seats four people. Mrs. Frick's color scheme for her prize-winning kitchen was beige, peach and rust. The kitchen is really an all-purpose room, since Mrs. Frick has made a provision not only for food preservation, preparation and cooking, and for eating but

has also included laundry equipment at one end of the room.

The judges who awarded the prize for the best all-gas kitchen in the *McCall's Magazine* contest included Dr. Mary Bryan, Director of Institutional Management at Columbia University; Allmon Fordyce, industrial designer; William Hamby, modern architect; Mrs. Harold McClinton, author and homemaker; Elizabeth Sweeney, household technologist at Syracuse University.

*McCall's Magazine* has published a complete tabulation of "What American Women Want in Their Kitchens," as disclosed by a detailed analysis of the 4,157 entries in the contest, which is available upon request to Arthur Hirose, Director of Research, *McCall Corp.*, 230 Park Ave., New York, N. Y.



## Hotel, Restaurant and Commercial Sales Meeting Brings Out Valuable Promotional Ideas

**E**MPHASIS upon modern gas counter-appliance sales techniques, and upon trends in the quantity cookery, baking and commercial heating fields which are affecting non-residential gas sales, characterized the 1941 A. G. A. Hotel, Restaurant and Commercial Sales Conference, held at the Palmer House, Chicago, April 24 and 25. About 150 executives, utility sales managers, industrial gas men, and appliance manufacturers from 18 states attended the conference. The significance of the subjects discussed was demonstrated by unusually active discussion from the floor and by heavy participation in the three round-table discussions scheduled on the afternoon of the second day.

### Handsome Counter-Cooking Display

Another outstanding feature of the meeting was a handsome display of 28 representative gas-fired counter-cooking appliances of latest design, produced by 17 manufacturers and arrayed in a room adjacent to the meeting hall. In view of the facts (1) that many appliances of this type are not too familiar to most gas men, (2) that the potential gas load they represent is so considerable, and (3) that at no other meeting or display during the year is such a complete group of gas counter appliances assembled for inspection, there was almost constant traffic and discussion about the display except during the formal sessions.

George F. B. Owens, vice-chairman, A. G. A. Industrial and Commercial Gas Section, and assistant vice-president of The Brooklyn Union Gas Company, opened the Thursday morning Sales and Utilization Session by reading the regrets of Section Chairman H. Carl Wolf, who was unable to attend and lead the meeting as a result of sudden family illness. Mr. Owens then outlined "The Chairman's Views on Hotel, Restaurant and Commercial Gas Sales," observing that the most intricate and difficult phase of utility sales was, in his opinion, that which this conference was dedicated to study. Notwithstanding, the hotel, restaurant and commercial load, according to Mr. Owens, is so large, profitable and rich in possibilities for development, that no effort should be spared in doing the best possible job in this quarter.

First formal speaker of the day was E. V. Fineran, manager, industrial sales department, Washington (D. C.) Gas Light

Company, who described the technique developed by his company in conducting annual Commercial Kitchen Modernization Campaigns, cooperatively involving gas company, equipment manufacturers, dealers, restaurant associations, and, of course, quantity cookery customers. Although such campaigns are unique in commercial gas sales practice (only 3 out of 29 surveyed utilities conducting them), the Washington company urges their wider use on the



Charles F. Hennessy, Chicago; George F. B. Owens, vice-chairman, Industrial Gas Section, and Watson E. Derwent, president, A.G.A.E.M.

basis that its third annual effort in this direction resulted in \$48,500 of new commercial cooking business directly traceable to the campaign. A 31-page mimeographed summary of all campaign details (and results) was distributed to each conferee.

After Watson E. Derwent, president, Association of Gas Appliance & Equipment Manufacturers, and vice-president, Geo. D. Roper Corp., Rockford, Ill., had outlined the growing interest on the part of manufacturers in the possibilities of broader commercial business, and had cited the counter appliance display among his proof that "The Manufacturers Are on Their Toes," J. B. Druse, manager, Commercial Gas Sales Division, Milwaukee Gas Light Company, analyzed "Business Opportunities in the Corner Bakery."

In order to show that gas has played an important part in the evolution of almost every phase of modern retail bakery technique, Mr. Druse referred to improvements in: revolving tray ovens; the application of gas refrigeration to dough retardation, ingredient storage and product display; batch and continuous doughnut frying by

gas; gas-fired oven steamers; gas-fired proof boxes; and gas water heating for cleaning and pasteurizing. He concluded with a summary of the gas-fueled-equipment situation among Milwaukee's retail bakers—noting that 47% of the bake shops are served by gas, that 335 retail bake shops use 79 pieces of gas equipment consuming 7 million cubic feet of gas per month, representing 35% of the company's commercial load and 10% of the combined commercial and hotel and restaurant load.

### War to Bring Technological Advances

A staccato review of national trends, both in commercial and general business brackets, made fascinating luncheon listening at the hands of Floyd W. Parsons, editorial director for *Gas Age* and *Industrial Gas*, Robbins Publishing Company, New York. An encouraging point of view in the current somber international situation was suggested by Mr. Parsons' summary of the improvements in business practice and production technology which may directly result from the stimulus of war.

"Progress in Miscellaneous Commercial Gas Equipment Usage" seemed to Lawrence R. Foote, Central Illinois Electric & Gas Company, Rockford, Ill., to hinge upon better market surveys and wiser methods of sales approach. He urged sales activity in this quarter to be organized, not by "type of establishment," but by "type of gas usage"—the reverse of general practice. He further advocated campaigning on one type of gas usage at a time to avoid "spreading the butter so thin that it is not noticed." Mr. Foote suggested that the miscellaneous commercial



Participants in the "after adjournment" discussion clinic. Left to right: John L. Hall, Los Angeles; Edward V. Fineran, Washington, D. C.; Walter D. Crouch, New York, and an unidentified delegate



business, so often neglected, may truly become "an anchor to windward" in the future.

At this point, R. M. Conner, director, A. G. A. Testing Laboratories, was called upon to outline progress in developing A. G. A. Approval Requirements for commercial gas-using equipment not covered by existing standards. Attention was directed to the fast-developing certification specifications for counter cooking apparatus. Manufacturers were urged to follow this development closely, and submit equipment for test and approval as soon as the new A. G. A. standards become effective.

#### Show Customers a Way to Profit

"Modern Food Service," according to Paul Moore, nationally noted restaurant executive of Chicago, *should* mean to the gas industry an opportunity to show its hotel and restaurant customers a way to profit. He recommended that every sales proposal be accompanied by a statement indicating the length of time which will be required to write off the cost of new replacement equipment in food, fuel, time and other savings. He urged that utilities, thus, make it easier for the executive management of purveying establishments to reach decisions quickly.

Using a stunt to dramatize his meaning, Fenton Kelsey, Jr., president, Fenton Kelsey Company, Madison, Wisconsin, appeared on the platform for the closing address of the day in a nondescript outfit. "I was told to talk on counter appliances—gas counter appliances—so I thought I had better dress in keeping with the subject," said he. "Selling in this field to date all boils down to one word—*makeshifts*." As a partial cure, Mr. Kelsey suggested more enlightened direct-by-mail approaches to the prospect—and urged that every campaign be a "forever" activity. In conclusion, he presented, as an example, one of his company's new direct-mail services in the counter cooking field, entitled "Profit Tips." Each of six issues was attractively accented on a poster.

#### Gas Kitchen Cooler and Dryer

By far the most surprising data disclosed at the conference was that presented by C. George Segeler, engineer of utilization,

American Gas Association, New York, on the subject of "Is There Excess Heat in Restaurants?—An Analysis of Recent Studies." After reviewing psychometric tests concurrently made in 18 sets of comparable gas and electric kitchens of various types in various parts of the country, it was surprisingly demonstrated that the gas kitchen may actually be cooler and dryer than the equivalent electric kitchen. This is in direct contradistinction to existing belief and advertising claims, and gives the industry invaluable competitive ammunition. It was observed that this condition may result from, among other factors, the better ventilation automatically achieved in the gas kitchen by the flue-connection of gas appliances. Caution was urged in using this potent new sales argument until further demonstrations of its validity and further supporting case history data are collected.

George S. Jones, Jr., vice-president, Servel, Inc., Evansville, Ind., in outlining his company's estimate of "Commercial Gas Refrigeration in 1941," pointed to the recent decision of his company (in cooperation with the Association's Commercial Refrigeration Committee) to concentrate sales effort in two areas where all conditions are most favorable for properly promoting this class of business. Although 39 gas companies have already sold over 500 commercial gas refrigeration installations, and over 4½ million dollars has been spent in developing the present unit, it is felt that greater ultimate benefit to the industry will result from doing a complete and superior job in a few favorable quarters first—rather than attempting broader but less thorough promotion.

#### Sell Results and Service—Not Nuts and Bolts

Two successive features of the program brought the meeting up to date on the matter of "Gas in the Food Service Field"—both events sponsored by the A. G. A. Food Service Equipment Committee. The first, a review by Lester A. Dubberke, Milwaukee Gas Light Company and chairman of the committee, covered the committee's three long-range objectives and the desirability of selling "results and cooking service" rather than "nuts and bolts." It was the speaker's opinion that our electric com-



C. George Segeler, A. G. A. engineer, disclosing surprising data on the excess heat and humidity developed in comparable gas and electric kitchens

petition is outdoing us in sales technique if not in equipment, installations, or dollar volume. The second feature involved 9 leaders in the field who conducted an open "bull-session" on the platform under the leadership of Eugene D. Milener, secretary of the Section. Questions, answers, differences of opinion, and unusual points of view, mainly on subjects not covered by the formal presentations, were given an airing by means of this feature of the program.

Entertainment, with a clue to personal profit, was provided at the Friday luncheon by Howard C. Smith, popular proponent of the Dale Carnegie movement in Chicago. Smith demonstrated a system for memorizing names by personally introducing every single conferee at the luncheon. The closing maneuver, a contest among the audience in applying the simple name-memory principles explained by Mr. Smith, was won by Lawrence R. Foote with a score of 90%.

By demand, the afternoon of the second day at every A. G. A. Industrial and Commercial Gas Section Conference for the past three years has been devoted to concurrent Informal Round-Table Discussions. The subjects up for idea-interchange at this meeting were "Bake Ovens & Heavy-Duty Cooking Equipment," "Volume Water Heating, Steam Generation and Refrigeration," and "Counter Appliances," led respectively by J. B. Druse, Milwaukee Gas Light Company, Gebhard C. Beck, The Brooklyn Union Gas Co. and chairman, A. G. A. Volume Water Heating Committee, and Walter D. Crouch, Robertshaw Thermostat Co.

Considerable of the time taken by Mr. Druse's group of 20 was devoted to technical comment on the sizing, control and maintenance of deep fat fryers. The group of 40 joining Mr. Beck requested F. C. Neuls of The Brooklyn Union Gas Company to describe his company's highly successful application of gas refrigeration to beer cooling, probed trends in the use of hot water for the sterilization of eating utensils, and reviewed the activities of the Volume Water Heating Committee to date.



Action at the hotel and restaurant conference. Left to right: Paul Moore, noted restaurant executive, examines a gas toaster in the equipment display; Lawrence R. Foote, Rockford; J. B. Druse, Milwaukee, and Edward V. Fineran, Washington, D. C., in a "buddle"; and Fenton Kelsey, Jr., Chicago, dressed in a makeshift outfit to dramatize his talk on direct mail services

# Broadening Horizon for Industrial Gas Noted at Dallas Convention

PERHAPS the most apt summary of the Industrial and Commercial Gas Sales Conference at the A. G. A. Natural Gas Convention, held in Dallas, Texas, on May 6 and 7, was given by H. Carl Wolf, chairman, Industrial and Commercial Gas Section, and president, Atlanta Gas Light Company, who presided over the meeting. In his wind-up talk, "From Here—And How?", Mr. Wolf observed: "Never before have I participated in a program of wider scope. No one can have taken part in this meeting without realizing the ever-broadening horizon, the expanding possibilities, and the mounting enthusiasm characteristic of the industrial gas business today. In the past two afternoons we have discussed everything from chicken brooders to open hearth furnaces—and the only thing left to say now is, go home and work like hell—goodbye!"

First speaker was Manley H. Clark, Southern Counties Gas Company of California and chairman, A. G. A. Gas Engine Power Committee, who saw three dominant developments affecting "What's Happening in the Gas Engine Field": (1) the development of the moderate speed multicylinder natural gas engine, (2) improvements in methods of waste heat recovery utilizing the new principle of cooling engines at temperatures above 212° F., and (3) the development of new and better methods of absorption refrigeration which fit in beautifully with gas engine waste heat utilization installations. "The newer moderate-speed engine does not supplant the older heavy-duty engine, but merely opens a field of application hitherto closed to gas engine power," said he. In connection with high temperature cooling Mr. Clark cited actual installations and demonstrated that up to 55% of the energy input of the gas can be salvaged as low pressure steam with an additional 23% as power without affecting engine working parts, increasing lubrication difficulties, or causing undesired room heating.

Reporting upon progress in connection with the development of an A. G. A. Boiler Installation Code, L. S. Reagan, Webster Engineering Co., Tulsa, indicated that the Code would go into effect shortly. Mr. Reagan's Committee believes that it has developed a workable Code which will fit in immediately with most local regulations, that the Code is not sufficiently restrictive to disrupt current sound practices.

## Gas Year-Round Air Conditioning a Reality

John K. Knighton, Servel, Inc., Evansville, Ind., startled many with the bald statement: "At last, gas residential air conditioning is now a reality"; and he demonstrated the point in "markets" and in "sales potentials" for the new year-round absorption type of unit. "We have every reason in the world to become excited about our pos-

sibilities," said Mr. Knighton, "because of the peculiar suitability of the new absorption unit to residential requirements, because the fertile new-homes market is expanding, and because the sales potential in homes worth \$75,000 and up is sufficiently large enough to permit us safely to prepare ourselves for the broader markets."

Perhaps the greatest points of distinction between antiquated and modern industrial gas equipment have to do with automatic controls—both for safety and for better process regulation. In interpreting "What Automatic Controls on Your Installations Mean to Your Customers and to You," A. C. Grant, Minneapolis-Honeywell Regulator Company, noted that although the occasional boiler or oven accident receives much publicity, many times more accidents are prevented by the unsung operation of wisely selected and properly adapted safety controls.

## Encouraging Industries in Your Town

Featured event at the Industrial and Commercial Gas Sales Luncheon preceding the Wednesday afternoon session was a discussion of the subject, "What Methods Can Be Effectively Used in Cooperating with Your Chamber of Commerce and Similar Organizations." R. G. Soper, president, Dallas Gas Company, and himself a prominent civic figure in the North-Texas area, introduced the featured speaker, J. Ben Critz, vice-president and general manager, Dallas Chamber of Commerce, with the observation that in his city the cooperation and services of the Chamber are regarded as invaluable to all phases of the community's industrial life. Mr. Critz outlined what an average Chamber of Commerce can do to help the gas utility, citing concrete examples of co-operative file-building by The Dallas Gas Company and his Chamber.

To start off the afternoon meeting with a symposium of business-getting ideas concerning "Miscellaneous Gas Uses," Jack Torbert, Wyandotte County Gas Co., Kansas City, described an ingenious adaptation of gas-fired hot water circulated through copper coils used to incubate eggs and brood chicks in the Kansas City area. So successful has been this new technique that one of the hatcheries has organized a manufacturing organization to offer this new type equipment to the poultry trade. With it, a 75-gallon heater is sufficient for a 100,000-egg unit. Further, the brooder more closely simulates the mother hen than any equipment available to date.

J. W. Duvall, Consolidated Gas Utilities Corporation, Oklahoma City, cited the reconditioning of a reel bake oven by removing the perforated refractory arch and installing blue flame refractory-heated burners. As a result, the customer now enjoys a 20% reduction in gas consumption, 7% greater production, the elimination of \$200 per year

maintenance on the arch, reduced spoilage, and a heat-up time one-third of the former amount. In discussing commercial cooking, A. B. Banowsky, United Gas Corporation, Houston, maintained that it is still possible in natural gas areas to re-analyze the true needs of hotels and restaurants, and recommend changes for quicker and better service—with resultant increases in gas load. He cited instances wherein quantity cookery customers have been able greatly to improve and to accelerate their food service at an additional equipment cost of less than \$80, although the rate of overall gas consumption was materially increased.

"America has a tremendous edge on the rest of the world with regard to one of the greatest essentials of war and defense—energy—energy in the form of natural gas," commented W. B. Head, assistant to vice-president and general manager, United Gas Corporation, Houston, Texas, in discussing the part natural gas is playing in national defense. "In all of Central Europe there is no such mighty pool of latent power—ready-made in the heart of the earth—such as we have here in America. In our hands, under the control and management of our industry, is one of the greatest industrial advantages for defense and for aid to England." After summarizing the countless contributions of natural gas to the preparedness program—in heating, cooking, and water heating in cantonments; in the manufacture of tanks, airplanes, armor plate, glass and whatnot; and in the use of our fuel as a raw material in the production of rubber, tetraethyl lead, solvents and explosives—Mr. Head showed how widely the distribution of natural gas in the United States has expanded since 1918, so as to make its benefits now almost universally available.

## Large-Volume Uses Analyzed

The closing phase of the meeting involved a series of five papers by experts in various classes of "Natural Gas Utilization in Larger Heating Operations." Concerning, respectively, the heating requirements of the ceramic industry, the metal industries, oil refineries, power plants, and railroad shops, were papers by D. D. Beach, Macon Gas Co., Macon, Ga.; George M. Parker, Mississippi River Fuel Corp., St. Louis, Mo.; Frank S. Kelly, Jr., Arkansas Louisiana Gas Co., Shreveport, La.; George V. Rowland, Cities Service Gas Co., Bartlesville, Okla.; and D. W. Reeves, Oklahoma Natural Gas Co., Tulsa.

Mr. Beach restricted his comments to the firing of heavy clay products, principally brick, and suggested a very careful study of each particular situation because "firing procedure will not only vary in the same locality between plants but also with clays from the same pit or deposit as it is worked along different strata."

George M. Parker limited his discussion to the best methods of firing open hearth furnaces with natural gas. Cautioning that very little has been done in the way of developing open hearth designs to take full advantage of natural gas firing, and that the gas industry will lose the open hearth market unless more efficient gas-fired furnaces are developed, Mr. Parker described a few important changes which would have to be made in order to develop a "streamlined gas-fired open hearth."

#### Oil Refineries Use More Natural Gas

According to Frank S. Kelly, Jr., the usage of natural gas by oil refineries, which amounted to 98 billion cu.ft. in 1939, is increasing and can be expected to increase although the heat required to refine a given amount of oil is decreasing. The reason for this anomalous situation is that refineries are using less and less still gases and oil for fuel purposes, diverting most of these by-products to gasoline polymerization and the manufacture of new synthetic materials. Further, the increasing number of polymerizing and synthesizing operations practiced by refineries are calling for greater power requirements, a large percentage of which may be met by gas engines or gas-generated electricity. With respect to localization of this load, it was noted that 90% of it is in the Mid-Continent, Gulf Coast, and California areas. Mr. Kelly concluded, "So long as natural gas rates and service to refineries are competitive with refinery residue products, the natural gas companies should continue to obtain increasing refinery load."

"The use of gas for electric power generation amounts to 183 billion cu.ft. per year, or 12.6% of total gas industry sales. In general, natural gas is used either wholly or in part for three types of power plants: gas engines, waste heat boilers, and power boilers. The load factor of this business is highly desirable, its peak coming in August and its low-point ( $\frac{1}{2}$  less) falling in February." This type of data was used by George V. Rowland, to demonstrate why we must keep gas utilization out in front of its competition in the power plant. Despite improvements in competitive equipment, Mr. Rowland maintained that the fundamental arguments in favor of gas (less installation cost per h.p., reduced boiler and furnace maintenance, better efficiency records, and higher boiler ratings) still hold—although our margin of advantage is less.

In discussing natural gas sales to railroads, D. W. Reeves expressed the belief that considerable possibilities lie in supplying gas for: (1) boiler plants, (2) the initial firing of locomotives and (3) furnaces, forges, space heating, etc. Before possibilities in this direction can be fully exploited, four fundamental steps must be taken: (1) a sympathetic understanding of the railroads' difficult problems, policies, and viewpoints, (2) gas rates that will vary with the cost of competitive fuels so that relative costs remain constant (3) complete tests to establish comparative values of fuels

as applied to each particular plant, and (4) the installation of the very best equipment available, including complete automatic control. Cleanliness, convenience, increased output and better working conditions are the inducements of gas in blacksmith shops; comparative efficiency and fuel-cost tests (made in the presence of railroad employees) are powerfully effective in getting locomotive-firing and boiler plant load. An interesting figure disclosed was that 5,000 to 15,000 cu.ft. of gas are used for the initial firing of each locomotive, depending upon the practice followed.

## Gas Combustion Aspects

ADDRESSING the Western Society of Engineers at its April 7, meeting held in Chicago, Dr. F. E. Vandaveer, assistant director of the A. G. A. Testing Laboratories, Cleveland, discussed new aspects of combustion of gaseous fuels as utilized in modern domestic and industrial appliances.

Illustrating his talk with lantern slides, Dr. Vandaveer reviewed properties of different fuel gases which affect their burning characteristics, and principles of design of modern equipment to secure good combustion.

## Lenox Reports to the Ceramic Industry on an A. G. A. Industrial Research Development



Leslie Brown

YOU have something to brag about, when your customers talk about you in the way that Leslie Brown, director of research for the famous Lenox potteries of Trenton, reported to the American Ceramic Society annual meeting in Baltimore on results with his new

*direct-fired bisque*

kiln using *radiant gas* burners. As the top technical man of a leading ceramic firm reporting to his own industry on the culmination of a production development sponsored cooperatively by the A. G. A. Industrial Gas Research Committee, the Public Service Electric & Gas Co. of N. J., The Selas Company and, of course, Lenox, Inc., and resulting in china firing techniques never before successfully attempted, Mr. Brown observed:

"The production per day from the new direct-fired gas kiln, including the weight of the setters, amounts to  $14\frac{1}{2}$  tons. During 3 months of continued operation, not a single piece of ware has been rejected because of a firing defect. This is unusual because it includes the very first pieces of ware sent through the kiln.

"We feel from our experience with this all-ceramic radiant gas burner, that it represents a very fine contribution to the ceramic field. It is, of course, a new application. However, the facts that the kiln atmosphere can be controlled at all times, that no muffles or checker-work are required, that turbulence within the firing chamber is reduced to a minimum, that the ware may directly face the burners at close range without overheating or flame impingement, that individual burners may be regulated without affecting the adjustment of other burners, and that the positive premixing of

gas and air allows an extremely wide range of burner turndown, are all quite important factors.

"We now operate our kiln on clay ware on a 30-hour cycle with a maximum temperature of 2080°, which is the equivalent of Cone 7, and our results have been very satisfactory. There was no period of making adjustments in the burners of the kiln, and there has not been a variation in the temperatures in the hot zone of more than 7° at any point of a car section, from bottom to top and from side to side.

"Our actual gas consumption today is 3200 cu.ft. per hr., which, at our rate, costs us only \$2.40 per ton of production—as over and against a cost of \$2.28 per ton of production if oil were used in a muffle kiln of latest type. The difference between gas and oil is, therefore, reduced on a straight fuel cost basis to 12 cents per ton or just about 5%. Further, a 36-hour cycle would be required with indirect firing as over and against a 30 or 28-hour cycle with the new direct radiant gas firing.

"On a B.t.u. basis, oil firing would amount to 4,634,000 B.t.u. per ton, and our gas consumption is only 3,250,000 B.t.u. per ton. That difference can only be charged to the elimination of the muffle, higher combustion efficiency, and high heat transfer.

"As a test at a temperature of 1950° (during the first heating up of the kiln) we loaded one of the sections with glost ware placed on open setters and fired in a 34-hour cycle. When removed the ware was examined and seemed to be perfect so far as our high selection standards are concerned. This is a very good indication as to the type of heat that is applied to the ware, and there were no indications of eggshell or blistering which might be expected under open, direct fire.

"I might state that there have been some preliminary trials made on the application of this ceramic radiant gas burner in the heat treatment of enamels of quite a variety of colors, and the first results look very promising."

Thanks, Mr. Brown! We are happy to be able to justify statements like these.





**Put him on the payroll!** Baker Anthony Ross of Syracuse says, concerning his production of 500 dozen doughnuts per day: "The gas fryer not only saves us money in fat, but is much quicker and turns out goods that are always uniform. We strain the fat in the fryer once a month and take the sediment from the bottom at regular intervals. We have had the fryer three years and only once has it been necessary to change the fat." Clip this statement, and, through it, introduce Mr. Ross to the bakers on your lines.

**Sale worth citing.** 12 big gas unit heaters for New York's largest roller-skating (30,000 sq.ft. floor area). Annual load: 4,150,000 cu.ft. Sales factors: low initial cost, greater heating flexibility, no need for boiler room.

**Atlantans learned about gas** in the manufacture of storage batteries last month, because they saw the story of Globe-Union's fueling displayed in the gas office window on Peachtree Street. Add Atlanta to the list of those who believe the populace wants to see what you're doing to help hometown industries. Veterans on the list? . . . Detroit, Brooklyn, Cincinnati, Toledo.

**While you've been debating** the merits of the waterless steam table, and how far you should go in promoting it—one manufacturer (a low bow to you, Mr. Duke) has already installed over 3600 units. Think of it!—3600 units. Surprised?

**Another archaic heating job goes modern—with gas.** We refer to Al Leudemann's (M-K-O) adaptation of a 2 hp. steam boiler (at 140 lbs. per sq.in.) to the controlled heating of the vulcanizing platens used in making shaving brushes. Believe it or not, the job has been done to date on an old open hot-plate piled with sand to avoid spot- and over-heating. We've got two-bits that says you can find three equivalents the-way-grandfather-did-it jobs in your territory in one month—if you look.

**"Read 'em and Reap"** from the recent trade press: "Up Output 12% on Bottle Melting Unit with Luminous Flame Control," CERAMIC INDUSTRY, March, pp. 56-8; "Profits In Air—The Kollsman Instrument Company," HEATING & VENTILATING, November, pp. 36-7; "Case Hardening of Buick Parts," INDUSTRIAL HEATING, April, pp. 364-8; "Flame Hardening of Gears," C. B. Hammers, WESTERN MACHINERY & STEEL WORLD, December, pp. 458-60; "Casting, Cutting Off and Heating Billets for Forging High-Explosive Shell," Arthur F. Macconochie, STEEL, February 10, pp. 54-60; "Summer Air Conditioning," G. F. Zellhoefer, GAS, April, 21-4.

**Orchid (with a string on it).** For a long time we've been itching to congratulate Standard Gas Equipment on starting the fine 8-page promotional tabloid to the hotel and restaurant trade, "Vulcan Bulletin of COOKING FACTS." The departments of the paper, its illustration, its copy style, its user's point of view, its sales punch—all had us poised at the keyboard with a great big orchid—six months ago. But we've only seen two issues in all that time. What happened? Sales literature doesn't take on a single shot. Hence the string on our June direct-mail bouquet.

**Special adaptation today—standard appliance tomorrow.** Eclipse devises for a meat packer a 26" x 15" x 12" meat-loaf-dipping tank heated by 60,000 B.t.u. per hr. of burners firing below the tank but inside a vented steel shell, fits the tank with double drain-boards, and announces in the April FOOD EQUIPMENT PREVIEW a new appliance—a "Gas-Fired Meat Loaf Cooker." Let's see, what's the "mother of invention"?

**Counting the cubic feet in tens-of-millions** per customer (as one can in the South), Frank Kelly with his refineries, George Rowland with his power plants, Don Beach with his brick yards, George Parker with his open hearths, and Dick Reeves with his railroad shops, seemed to be running a race for "biggest load" during the Wednesday Industrial and Commercial Sales Session at the Natural Gas Convention in Dallas last month. Ah me! Now what was I saying about the little soldering-iron furnace?

## INDUSTRIAL AND COMMERCIAL NATIONAL ADVERTISING FOR JUNE

The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full-page advertisements will appear in the trade and business magazines listed below during the month of June. These advertisements, which will appear in 16 publications reaching a total audience of 288,587, are prepared in co-operation with the Committee on National Advertising as a part of the Association's national advertising campaign.

### General Manufacturing

**BUSINESS WEEK** (June 28— $\frac{2}{3}$  page ad)—Full speed ahead on Defense Production with modern GAS equipment.

### Ceramic Industry

**CERAMIC INDUSTRY**—"I must have precision—with GAS alone we have close control, speed, clean heat and economy!"

### Food Industry

**FOOD INDUSTRIES**—Here's one insurance policy that doesn't call for premiums! Modern GAS equipment is your insurance of speed, flexibility, close control and economy. (General ad.)

**BAKERS HELPER** (June 21)—Keep your customers coming back for MORE and let modern GAS equipment help you to improve quality.

### Metals Industry

**THE IRON AGE** (June 12)—"I must have precision—with GAS alone we have close control, speed, clean heat, and economy!"

**STEEL** (June 16)

**METALS & ALLOYS**

**METAL PROGRESS**

**INDUSTRIAL HEATING**

### Hotel and Restaurant Field

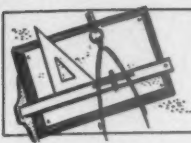
**HOTEL MANAGEMENT**—On Atlantic City's boardwalk GAS holds first place.

**AMERICAN RESTAURANT**—Here's one insurance policy that doesn't call for premiums! Modern GAS equipment is your insurance of speed, flexibility, close control and economy.

**CHAIN STORE AGE** (Fountain and Restaurant Section)—"GAS gives us economy in operation and the ability fully to control heat in our many requirements"—Paul J. Norcross, Mannings, Inc., Los Angeles, Calif.

### Processing Field

**CHEMICAL AND METALLURGICAL ENGINEERING**—"I must have precision—with GAS alone we have close control, speed, clean heat and economy!"



# Technical SECTION

D. P. HARTSON, *Chairman*  
HAROLD L. GAIDRY, *Vice-Chairman*  
A. GORDON KING, *Secretary*

## Ready for the Test is Verdict of Gas Engineers at Production and Chemical Conference

COLLECTIVE and concentrated scientific inquiry into the operating problems of the gas industry characterized the joint conference of the Production and Chemical Committees of the American Gas Association which attracted a record gathering of 337 registered technical men to the Hotel Pennsylvania, New York, May 19-21. A forward-looking program, tuned to the grave international situation, covered topics related to conservation, technical training, and improved methods of gas production.

The keynote of the Conference was struck in the opening remarks of L. E. Knowlton, Providence Gas Company, Providence, R. I., chairman of the Gas Production Committee, when he mentioned the predominant and indispensable role of the technical men in any national defense set-up and admonished the gas operating men to fill their own jobs better than ever before. "These are critical times and demand the best that is in us," he said. Giving point to Mr. Knowlton's remarks, other speakers touched again and again on the new problems created by the preparedness program and the readiness of the gas industry to meet them.

E. L. Sweeney, Boston Consolidated Gas Company, Everett, Mass., chairman of the Chemical Committee, was co-chairman of the Conference with Mr. Knowlton, and alternated as presiding officer.

The gravity of the hour and the important part the technical men will be

### As Reported by the Technical Section Editorial Committee:

Harold L. Gaidry, Chairman, R. J. Sheridan, V. J. Altieri, W. R. Fraser, B. P. Mulcahy, W. E. Lebo, Samuel Green, A. C. Sedlack, and W. T. Brown.

called upon to play in any emergency were further emphasized by Major Alexander Forward, managing director, American Gas Association, who said that the conference came "at the most serious and most important time to our industry and our country since 1918." He stated that everyone would be called upon for further service and sacrifice.

### Scarcity of Trained Men

Reflecting the growing scarcity of technical men, Major Forward stated that the gas companies are now experiencing the loss of trained men and that the Association's Laboratories had lost half of their experienced engineers since December. Some of these go into the service of the armed forces and others are leaving gas companies for higher pay, he said. Major Forward cautioned the latter to weigh the relative permanence of employment in the utility industry as against a higher but perhaps temporary wage scale.

Touching directly on the defense situation, W. Cullen Morris, A. G. A. representative on the National Technological Civil Protection Committee, told of the activities of this group which was organized to assist the War Department in the protection of civilians in time of war. In discussing the dissemination of information on experiences abroad, Mr. Morris brought out the necessity of training, and maintenance of plant operation during blackouts.



W. Cullen Morris, A. G. A. representative on the National Technological Civil Defense Committee, speaking on national defense. Seated are L. E. Knowlton, chairman, Production Committee, and R. H. Arndt, vice-chairman, Production Committee

The importance of continued availability of excess capacity, the study of emergency repairs and cooperation with civil groups were mentioned by Mr. Morris who stated that his committee had already prepared several pamphlets giving suggestions concerning emergency repair work and the necessity of providing emergency pumping equipment at strategic points.

### "First Line of Defense"

National defense as related to the utilities received further attention at a three-hour luncheon forum Wednesday, at which time a series of four-minute talks by prominent experts covered many vital points. Under the leadership of D. P. Hartson, chairman of the Technical Section, the following speakers reviewed the progress of the gas industry in formulating a defense program: S. J. Beale, West Gas Improve-

Left—E. L. Sweeney, chairman, Chemical Committee, presiding at one of the Conference sessions, (standing) and R. J. Sheridan, vice-chairman, Chemical Committee. Below is the speakers' table at the National Defense Forum. Left to right: C. S. Goldsmith, vice-chairman, Distribution Committee; V. J. Altieri, chairman, New Developments Subcommittee; Prof. E. S. Pettyjohn, University of Michigan; S. J. Beale, chairman, Builders' Section; D. P. Hartson, chairman, Technical Section; T. J. Shanley, A. G. A.; Luis Hilt, A. G. A.; P. B. Cadmus, chairman, National Defense Questionnaire Committee; V. A. Ogilvie, New York; and S. Green, chairman, Water Gas Luncheon Conference



ment Co.; New York; V. J. Altieri, Eastern Gas & Fuel Associates, Everett, Mass.; F. B. Cadmus, Consolidated Edison Co. of New York; Samuel Green, The Brooklyn Union Gas Co.; V. A. Ogilvie, Gas Advisers, Inc., New York; C. S. Goldsmith, The Brooklyn Union Gas Co.; Prof. E. S. Pettyjohn, University of Michigan; and Thomas Shanley, American Gas Association.

Terming the utilities as "the first line of defense," speakers at the luncheon outlined a formula for plant defense, training and checking of employees, methods of repairing damaged mains, pipelines and holders; as well as air raid precautions and other war-borne topics. Advance planning was called the key to any successful system of defense.

Of particular interest at the defense

symposium were the remarks of Prof. Pettyjohn of the University of Michigan, an expert on the operations of the selective service act, who urged the utilities to make every effort to hold on to their technically-trained men. "There will be little hope of adequate replacement after the defense program hits its full stride," he said. Prof. Pettyjohn urged the gas companies to make full reports to local draft boards concerning their skilled employees and to ask for occupational deferment of men in key positions.

An important part of the meeting was devoted to an analysis of the A. G. A. national defense questionnaire which was issued to the industry on March 10. With replies received from 66 per cent of the gas industry, a great deal of valuable information has been obtained. One important effect of the questionnaire was to awaken the gas companies to the need for preparing an adequate defense program.

A most interesting progress report on the operation of the Cleveland liquid gas plant for the storage and regasification of natural gas by J. A. Clark, Hope Natural Gas Company, Clarksburg, W. Va., was read by George Kinley of the same company. This report which was also presented at the Natural Gas Convention in Dallas, Texas, is printed in full in this issue of the MONTHLY. Lively discussion of Mr. Clark's paper brought out the fact that the liquefaction part of the plant would only operate from October to December and would be shut down during the summer season.

#### Co-operative Plan of Education

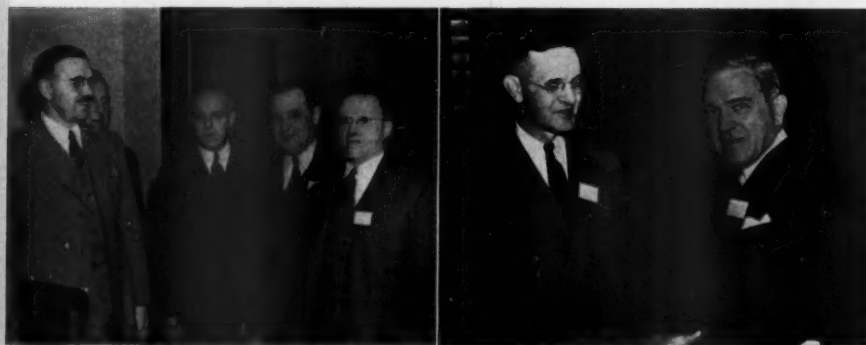
Estimating that the rapid expansion of industrial activities to meet defense demands will require from 45,000 to 50,000 engineers and scientifically trained men this year, Prof. W. E. Nightingale, director of cooperative work, Northeastern University, Boston, urged the gas industry to participate in the Co-operative Plan of Education to obtain an adequate supply of engineering skill. Under the cooperative plan, two students alternate with each other between class room study and fulltime work in industry.

While acknowledging that "a systematic, far-sighted personnel policy has been general practice throughout the gas industry," Prof. Nightingale contended that the co-operative plan of education would go far to solve the present problem of securing trained men. He cited specific applications of the plan at his own college where a group of chemical engineering students alternate their time between classes and work at a gas and coke plant. During the discussion, A. Gordon King, secretary, Technical Section, compared this type of training with apprenticeship as practiced in England, where young cadets were literally "farmed" out to their employer, who governed the life of the young men—even to their liking to "shoot dice" with their fellow men.

In opening the Monday afternoon meet-



Meeting of the Production Committee during the Conference. Left to right, seated: M. P. Novak, Joliet; K. Fuery, New York; L. E. Knowlton, Providence, chairman; R. H. Arndt, Baltimore, vice-chairman; H. M. Blain, New Orleans. Standing: Louis Drogin, Portland; A. C. Sedlacek, Philadelphia; F. J. Pfluke, Rochester; Dr. W. C. Rueckel, Pittsburgh; A. C. Krenz, Detroit; B. P. Mulcaby, Indianapolis; T. J. Shanley, New York; Samuel Green, Brooklyn; W. E. Lebo, Harrison; J. M. Beall, New York; S. J. Beale, New York; and W. K. Beard, Philadelphia



Left—Dr. A. W. Gauger, The Pennsylvania State College; B. J. C. Van der Hoeven, Pittsburgh; J. M. Gonder, Pittsburgh; R. W. Campbell, Pittsburgh; and W. T. Brown, Pittsburgh, chairman, Coal Carbonization Luncheon Conference. Right—Technical Section Chairman D. P. Hartson, of Pittsburgh, talking things over with A. G. A. Past President Clifford E. Paige, of Brooklyn



Left—Prof. E. S. Pettyjohn, University of Michigan, and W. R. Fraser, Detroit, in a candid camera shot. Center—Prof. W. E. Nightingale, Northeastern University, Boston. Right—Dr. C. W. Wilson, Baltimore, chairman, Chemical Luncheon Conference; C. E. Utermobile, Baltimore; and Emil G. Neuman, Baltimore



Below—Samuel Green, Brooklyn, chairman, Water Gas Luncheon Conference, opening the round-table discussion. Seated are R. H. Arndt, vice-chairman, Gas Production Committee, and W. K. Beard, Philadelphia



The Technical Section Managing Committee at a dinner meeting. Left to right, seated: R. E. Kruger, Rochester; G. Hanshaw, New York; H. L. Gaidry, vice-chairman, Technical Section; D. P. Hartson, chairman, Technical Section; John H. Wolfe, Baltimore; and E. L. Sweeney, Everett. Standing: L. W. Tuttle, Oak Park; H. D. Leberman, Philadelphia; J. M. Beall, New York; R. G. Griswold, New York; W. C. Philpot, Toronto; L. E. Knowlton, Providence; Dr. A. R. Powell, Pittsburgh; S. J. Beale, New York; S. P. Cobb, New York; J. V. Postles, Philadelphia; C. S. Goldsmith, Brooklyn; H. M. Blain, New Orleans; W. J. Murdock, Joliet; V. J. Altieri, Everett; and R. J. Sheridan, Brooklyn

ing, E. L. Sweeney, chairman of the Chemical Committee, pointed out that 55 per cent more gas was used in 1940 than in 1939, and estimated that a further increase will be required to fill the growing needs of the defense program. This situation brought up the need for increasing gas production with present equipment, which Mr. Sweeney coupled with personnel replacement as the most pressing problem confronting the gas industry today.

Mr. Sweeney complimented V. J. Altieri, Eastern Gas & Fuel Associates, Everett, Mass., for the outstanding report of the Subcommittee on New Developments which was distributed at the meeting. As chairman of this group, Mr. Altieri reported that the crucial world situation had given great impetus to all developments concerning new products, processes and conditions affecting productive capacity and ability to meet the demands of the preparedness and defense programs.

Citing the trail-blazing projects of recent years, the New Developments report

referred to the new liquefaction plant at Cleveland; use of natural gas as a chemical raw material; industrial research; coal, coke and by-product developments, and various gas production, purification and distribution practices. The report indicated that Germany is ahead of any other country in the world in technical operations related to the coke-oven and gas industry, but that considerable progress is being made in the United States.

William L. Glowacki, holder of the light oil fellowship of Koppers Company at Mellon Institute, Pittsburgh, Pa., presented a comprehensive review of light oil procedures and methods of test which aroused considerable discussion. The methods cited are directed to the average light oil analyst with limited equipment and literature facilities and were presented in valuable detail. During the discussion the suggestion was made that the American Gas Association should sponsor a complete set of methods which might well be included in a forthcoming issue of the Gas Chemist's Handbook.

#### Presence of Gas in Soil Analyzed

An authoritative paper on the "Changes in Composition of Manufactured Gas in Contact with Soil," presented by J. F. Anthes, The Brooklyn Union Gas Company, covered a five-year investigation of the subject. After analyzing and discussing the various laboratory tests which were made, Mr. Anthes said: "The presence of carbon monoxide in any soil atmosphere can be taken definitely as an indication of manufactured gas, but its absence does not necessarily mean that manufactured gas is not present. Gas, which has traveled a considerable distance through wet soil, may have had all of the carbon monoxide and hydrogen removed during its passage throughout the earth. A similar reduction in the carbon monoxide and hydrogen content would occur if gas were confined in wet earth with practically no movement of gas."

Since the illuminants or unsaturated hydrocarbons were never removed in any of Mr. Anthes' tests, he concluded that "it would appear to be good practice to strongly suspect the presence of manufactured gas in soil if the analysis indicated



Left—W. C. Philpot, Toronto, and William M. Campbell, Toronto. Center—Howard E. White, Bridgeport; Francis E. Drake, Reading; and John D. Alden, Asbury Park. Right—D. J. Reese, International



Nickel Corp., New York, and M. A. Mayers, Carnegie Institute of Technology, Pittsburgh—both speakers at the final session of the Conference devoted to Combustion Characteristics of Coke



the presence of unsaturated hydrocarbons even though no carbon monoxide or hydrogen was detected."

Significant discussion following Mr. Anthes' paper brought out the fact that one may readily differentiate among manufactured gas, gasoline and sewer gas by using a combination of combustible gas indicator and charcoal absorption test. It seemed significant that manufactured gas in contact with soil would leave behind a residual of ethylene and methane but would not show residuals of carbon monoxide and hydrogen. Of great interest was Mr. King's reference to Dr. Carl G. Deuber of Yale University who proved several years ago that gas, rather than always being harmful, in some instances will promote plant growth and was specifically beneficial in connection with young oak trees.\* Dr. Deuber was present and took an active part in the discussion of Mr. Anthes' paper.

The science of water treatment received extended attention in an able paper by Dr. R. E. Hall, director, Hall Laboratories, Inc., Pittsburgh, Pa., entitled "How Recent Developments of Water Conditioning Technique Are Combating Industrial Water Problems." Dr. Hall described four methods of softening water and prescribed treatments to meet specific requirements of different processes which he divided into two divisions: (1) that in which concentration by evaporation plays a major role, and (2) that in which it does not. In the latter division, he discussed the cleansing of greasy surfaces and the application of the Threshold treatment to the prevention of scale and corrosion in heat exchangers and water lines including examples of application to condensers, to city waters, and in the home.

In the spirited discussion evoked by Dr. Hall's paper, considerable interest was displayed concerning the embrittlement of boiler steel and the recommendations concerning the abandonment of A.S.M.E. alkalinity ratios. Answering a question regarding the addition of sulphate to maintain the required ratios, Dr. Hall stated that the A.S.M.E. ratios are somewhat in question today. He also emphasized that the use of the embrittlement detector on boilers would enable one to forecast whether or not a water under varied conditions met in power plant operations would cause the destructive results wrought by embrittlement.

#### Economic Position of Manufactured Gas

R. A. Sherman, Battelle Memorial Institute, Columbus, Ohio, opened the Tuesday morning session of the conference with a stimulating discussion of the economic position of the manufactured gas industry. Mr. Sherman pointed out that there was very little opportunity for increasing the

\* Articles by Dr. Carl G. Deuber which have appeared previously in the A. G. A. Monthly include: "Accelerating Seed Germination with Gas," 313, Aug., 1933; "Observation of Shade Trees in the Vicinity of Gas Leaks," 465, Nov., 1933; "Stimulative Effects of Gas on Small Trees," 380, Sept., 1933; "Effects on Trees of an Illuminating Gas in the Soil," 440, Dec., 1936.

## Thank You!

Through the cooperation of an editorial committee headed by Harold L. Gaidry, vice-chairman of the Technical Section, the A. G. A. MONTHLY was able to carry a complete story of the Distribution and Motor Vehicle Conferences in the last issue despite the fact that the conference took place after the normal deadline for the issue. The MONTHLY is indebted to the following men who assisted Mr. Gaidry and made possible this prompt reporting: H. W. Battin, H. G. Horstman, C. S. Goldsmith, J. M. Pickford, G. J. Heckendorn, and Linn Edsall.

efficiency of the carbonizing process and that any appreciable advance in the industry would have to come from improvement in processes or widening of markets. To decrease the cost of production of water gas, the suggestion was made that more attention be given to the use of bituminous coal as a fuel for the water gas generator with the diversion of the coke now used for this purpose to more profitable markets.

Mr. Sherman stated that every effort should be made by the manufactured gas industry to increase the realization on its by-products of which coke is by far the most important. He directed attention to the sale of coke to the foundry which he called the most profitable market. During his address Mr. Sherman referred to previous studies made by A. M. Beebe, Leon J. Willien and others, which had brought out pertinent facts.

Clifford E. Paige, president, The Brooklyn Union Gas Company, who discussed Mr. Sherman's paper, described it as a particularly valuable contribution because of its provocative nature and the significant references used in its compilation. In further discussion, Dr. A. R. Powell pointed out the necessity for further work in connection with qualities of domestic coke in order to protect the market while R. E. Kruger suggested that care should be exercised in the application of the production of foundry coke. Dr. H. C. Porter expressed the opinion that the industry should concentrate on building up sales per unit of investment.

#### Coal Carbonization Pressures

A joint paper by Drs. Walter Fuchs, A. W. Gauger, A. G. Sandhoff and J. A. Taylor of The Pennsylvania State College, entitled "Investigations Concerning the Pressures Developed During the Carbonization of Coal," was presented by Dr. Fuchs and discussed later in the day at the luncheon conference on Coal Carbonization and By-Products. This paper described a newly-developed 4½-inch laboratory oven consisting essentially of a rectangular silica brick chamber which will conveniently hold several pounds of coal of a size dis-

tribution comparable to that of commercial blends. It was stated that laboratories engaged in assaying coals would find this new oven valuable for predicting coking pressures and that it would be expected to check better than plus or minus 10 per cent. Discussion at the luncheon conference by C. C. Russell, W. T. Brown, V. J. Altieri, Dr. H. H. Lowry, of Carnegie Institute of Technology, and B. P. Mulcahy, brought out the opinion that the size of the unit permitting small quantities of materials to be tested made it an extremely valuable contribution to the gas industry.

Useful information covering "Two Years' Experience with Reversed Flow Machines at Portland, Maine," compiled by George R. Steere, formerly assistant manager, Portland Gas Light Company, and now vice-president, Seattle Gas Company, was presented by Louis Drogoin of the Portland company. Mr. Steere's paper covered complete operating details, and reported that the average efficiency for the two-year period was 82.1 per cent. When reforming oil up to 40 per cent, the best results were obtained at about standard rated capacity of 138,000 per hour, it was brought out. Of particular interest was the fine revenue obtained from the tar produced at the plant. In the ensuing discussion, it was the consensus that the results obtained were exceptional in view of the newness of the process.

#### Luncheon Conferences Popular

Continued popularity of the round-table luncheon conferences was demonstrated by the large attendance at each of the three meetings on Tuesday afternoon. These meetings, held simultaneously, were divided as follows: Coal Carbonization and By-Products—W. T. Brown, Jones & Laughlin Steel Co., Pittsburgh, chairman; Water Gas Operation—Samuel Green, The Brooklyn Union Gas Co., chairman, and Chemistry in the Gas Industry—Dr. C. W. Wilson, Consolidated Gas Electric Light & Power Company of Baltimore, chairman.

In addition to a full discussion of the paper presented by Dr. Fuchs on "Investigations Concerning the Pressures Developed During the Carbonization of Coals," mentioned previously, the Coal Carbonization meeting developed valuable information on the following topics: storage of coal, new developments in plasticity—expansion and carbonization, effect of fast coking time on coke structure, ammonium sulphate dryers, light oil recovery and oil treatment of coal.

All phases of water gas operation were explored at the roundtable conference devoted to this subject. Problems related to increased capacity of generators, water gas enrichment, methods of control for operating sets, purification, carbon deposition in plants using heavy oil, and use of water gas tar in generators, were among those singled out for extensive discussion. The renewed interest in the use of soft coal as generator fuel, due to the increase in demand for coke and possible rise in coke

prices, evoked considerable discussion. It was emphasized that many changes have taken place since the industry's previous experience with bituminous coal as a generator fuel in 1918—principally the dependence on high set capacities for meeting demands and the use of heavy oil in the generator.

Contrary to the procedure at the other luncheon meetings, the chemical round-table conference offered three prepared papers in addition to extemporaneous discussion of chemical problems. N. W. Hartz, Mine Safety Appliance Co., Pittsburgh, Pa., spoke on the "Combustible Gas Detector with Various Ranges," pointing out the recent advances in portable gas detection instruments. Dr. A. W. Gauger, of The Pennsylvania State College, presented a progress report on "Determination of Water Vapor in Gaseous Fuels," prepared jointly with F. C. Todd and W. J. Wiseman, Jr., of the same college. Promising results have been obtained by the use of the infra red spectrophotometer, Dr. Gauger indicated. The third paper by Kenneth A. Kobe, University of Washington, Seattle, discussed "Platinized Silica Gel as a Catalyst in Gas Analysis."

Among the topics covered by the chemical group were: insulation of purifier boxes, new developments in meter diaphragms, determination of suspended solids in gas, the ammonium thiocyanate plant at Everett, Mass., pyridine recovery, calorimeters for the B.t.u. content of gas and the use of substitute materials for aluminum and rubber tubing. Various aspects of national defense work were also aired.

#### Use of Ammonia in Purification

The Wednesday morning session opened with a noteworthy paper by Linn B. Bowman, Rochester Gas and Electric Corp., Rochester, N. Y., on "The Use of Ammonia in a Thylox Liquid Purification System." Mr. Bowman reported that the use of ammonia as an alkali in the Thylox purification process at Rochester in place of soda ash has resulted in substantial savings. Less operating and maintenance labor is required when using ammonia and oxide costs are greatly reduced, he brought out. The only increase in operating expense is the maintenance of a slightly higher solution temperature, he said. Mr. Bowman gave a full description of the plant, which has been in operation approximately seven years, and the method of operation, and concluded that results had been very satisfactory both from operating and economic viewpoints.

Dr. A. R. Powell pointed out that the Rochester plant operated very efficiently in view of the fact that it was handling much more gas than that for which it was designed. He also commented on the new Boston Thylox plant where soda is being used, and gave figures to show that satisfactory operation could be obtained in a plant which had adequate capacity for handling the gas. A plant at Troy, New

York, which is operated primarily for the recovery of sulphur also entered the discussion.

In the absence of George R. Bentley, superintendent of production, Michigan Consolidated Gas Company, Detroit, who is serving as Lt. Colonel in the U. S. Army, his paper on "Maintaining Gas Manufacturing Plants for Peak Load and Emergency Use in a City Using Natural Gas" was read by L. G. Kreuz of that company. Mr. Bentley's paper gave an able and complete summary of procedures which must be followed if an emergency stand-by plant is to be maintained in satisfactory operating condition. He maintains that "there is no satisfactory way in which manufacturing equipment and pumping facilities can be positively maintained so that operation will proceed without delay when required, except to actually use the facilities available." The source of personnel and maintenance problems was also thoroughly discussed.

H. M. Blain of New Orleans formally discussed Mr. Bentley's paper and again pointed out that no stone should be left unturned to provide for the production readiness of stand-by plants.

The morning session concluded with a paper by J. D. Doherty, The Koppers Coal Company, Pittsburgh, on "Coal for By-Product Coking." Mr. Doherty gave an excellent description of the improved methods being used in the preparation of coal at the mines, and described how this improved handling has lowered the undesirable constituents normally present in solid fuels. He also called attention to the advisability of blending coals at the mines so that a more desirable product would be supplied the user. H. H. Himsworth, of

New York, in his discussion referred to the wealth of information in Mr. Doherty's paper and stated that appended references should prove particularly valuable to users of solid fuel.

Following the defense forum, reported previously, Martin A. Mayer, Carnegie Institute of Technology, Pittsburgh, spoke on "Combustion Characteristics of Coke." Mr. Mayer presented useful data on this subject and strongly recommended that additional experimental work be done similar to the American Gas Association program reported in 1926 and 1928 on five cokes made from Pittsburgh seam coal.

Foundry coke practice and recent developments in this field were discussed by D. J. Reese, The International Nickel Co., Inc., New York, in an authoritative paper which brought to a close the Production and Chemical Conference. Mr. Reese traced the development of cupola fuel and evaluated the various grades of coke used for this purpose.

As the Conference was concluded, many delegates expressed their conviction that it had been one of the most significant and valuable meetings the operating gas men had held since these conferences were inaugurated many years ago.

#### Natural Gas Convention

(Continued from page 208)

ing engineer, Research and Development Laboratories, Crane Co., Chicago. With the aid of clear-cut illustrations, Mr. Seabloom presented data from tests conducted to determine the reduction in strength caused by the attachment of

## Filling Gas Mains with Grease To Make Emergency Shut-Offs

Of exceptional interest in discussions of national defense problems at the A. G. A. Distribution Conference in Pittsburgh and the Production and Chemical Conference in New York, was a newly developed method of filling low pressure gas mains with grease to make emergency shut-offs. This method was developed by The Philadelphia Gas Works Company after experiments originating in 1936. The next issue of the A. G. A. MONTHLY will carry an article by H. B. Andersen of the Philadelphia company describing these experiments and giving a full description of the new development together with diagrams of the methods involved.

Developed as a means of shutting off gas in emergency from a section of low pressure mains, this method takes considerably less time than the time-honored procedure of excavating, tapping and bagging. By pumping heavy grease through a house service into the main it was found possible in tests to make a shut-off in five minutes or less that would hold for at least 24 hours against 7 inches of water column. It took many trials of various combinations of grease and equipment to attain this end.

Actual experimentation with the equipment was made on the street by shutting off mains which were about to be abandoned. These experiments were successful and indicated a tighter seal than had been expected. As a result of tests, two different grades of grease were selected for use, one for cold and the other for warm weather.

Mr. Andersen's article will include both standard methods of operation when house service is available and alternate methods of operation when house service is not available.



nozzles to piping and other factors of value to pipe line operators.

The Transmission Conference ended with a discussion of improvements and use of pipe line construction equipment. Those participating included: Lawrence H. Favrot, LaTex Construction Co., Houston; Charles S. Foreman, C. S. Foreman Co., Kansas City; and Tom Jones, T. R. Jones, Inc., Dallas.

A large part of the first Production Conference session was devoted to recent developments in shooting and acidizing of natural gas wells. Reports showed that while progress in this field has greatly increased the current production of wells and added materially to the ultimate recovery of many old fields, each area presents different problems which should be carefully studied. The symposium on this subject included the Texas Panhandle, Hugoton, Kans., Monroe, La., and eastern fields. Those taking part in the discussion included: J. M. Hanley, production engineer, Northern Natural Gas Co., Omaha; T. W. Johnson, Union Producing Co., Shreveport; J. J. Schmidt, field superintendent, The East Ohio Gas Co., Cleveland, and Coleman Hunter, geologist, Kentucky-West Virginia Gas Co., Ashland, Kentucky.

Kenneth Eilerts and R. Vincent Smith of the U. S. Bureau of Mines staff at Bartlesville, Okla., presented a joint paper on "Specific Volumes and Critical Properties of Separator Gas and Liquid Hydrocarbon Mixtures." This paper was well received and will be made available to the industry at an early date.

#### *Mixing of Gases in Porous Media*

The final production session opened with another joint paper—"Mixing of Gases in Porous Media" by R. L. Huntington, director, and Valentine Mertz, natural gas fellowship student, School of Chemical Engineering, The University of Oklahoma, Norman. This was followed by a discussion of problems incidental to the disposition of salt in producing formations with Henry C. Walton, Republic Natural Gas Co., Hugoton, presenting an interesting paper. He indicated that there was need for further investigation and more definite knowledge on this subject. Among those who spoke on this practice were J. W. Horne, U. S. Bu-

reau of Mines, Bartlesville, and E. A. Brown, Lone Star Gas Co., Dallas.

Completion of gas wells through producing pay to obtain data for reserve estimates and for other purposes was adequately covered in a paper by J. G. Dickinson, general superintendent of production, Texoma Natural Gas Co., Amarillo, and discussed by R. O. Garrett, Arkansas Natural Gas Co., Shreveport, and L. T. Potter, Lone Star Gas Co., Dallas. Valuable information for reserve estimates and improved well control through selective completion practice was brought out in this discussion.

With certain limitations cathodic protection may provide an economical means of combating corrosion on gas well casings, William E. Huddleston, corrosion engineer, Cities Service Gas Co., Bartlesville, told the production men. Stating that the most satisfac-

tory practice was to insulate new wells as they are completed, Mr. Huddleston said that experience indicates that the useful life of well casing can be at least doubled provided the well is insulated within a few weeks after being connected to the gathering system. Starr Thayer, consulting engineer, Houston, Texas, and G. R. Olson, United Gas Pipe Line Co., Shreveport, supported Mr. Huddleston's conclusions. Mr. Thayer stated that cathodic protection could be used to advantage in many fields where casing failures were frequent.

Conferences on accounting, residential sales and industrial and commercial gas sales and a home service luncheon meeting rounded out the comprehensive program of natural gas activities during the convention. These meetings have been reported elsewhere in this issue of the MONTHLY.

## Personnel Service

### SERVICES OFFERED

**Distribution Superintendent or Engineer (36)** extensive experience with leading natural and manufactured gas properties on construction, operation and educational activities; B.S. and M.S. degrees in engineering; excellent references; employed but desire change with more possibilities. 1410.

**Plant Superintendent:** Twenty-seven years of thorough experience in gas plant operation. For the past thirteen years in complete charge of operation and maintenance of medium size water gas plant. Family man. Weight 160. Age 44. Best of references. 1415.

Man exceptionally qualified to head **industrial** department of large utility, to serve a **combustion engineering** concern, or large consumer. Experienced in market surveys, sales promotion, consulting with consumers on utilization. Authority on relative merits of fuels. Writes clearly, in non-technical style. Resourceful—friendly. Registered professional engineer, N. Y. and Pa. 1416.

**Gas Engineer**, twelve years' experience in **gas utilization**. Activities at present mostly on residential usage but experience includes commercial and industrial utilization. Cooperative and active on gas association committee work, including sales, service technical and appliance servicing. Past accomplishments made on promotion of gas utilization and reduction of service costs. 1417.

**Rate Engineer**, for past twelve years staff engineer with engineering consultants prominent in public utility field. Thoroughly experienced in rate research including rate design and application, rate case data, commission negotiations, valuations, original cost, property records, cost analyses, economic and financial studies, investigations, management problems. College graduate, 36, married. 1418.

Wanted: **Sales or production work** in a chemical concern. B.S. in Chemistry, "cum laude." Phi Beta Kappa. Experience in teaching and dealing with people of all ages. 1419.

Technical graduate (38) registered professional engineer, desires position with utility as **industrial gas engineer**, or with manufacturer as heating and air conditioning engineer. Background includes supervision, contracting, purchasing equipment, sales, design and maintenance. 17 years' experience includes 11 in gas industry. 1420.

### SERVICES OFFERED

As **salesmanager** salesman, purchasing agent, or factory representative. Twenty-three years' experience in practically every branch of the companies in greater New York. 1421.

**Salesman** with twenty-five years' experience in stove business. Following among department, furniture, appliance stove stores, also utilities. Want complete lines gas, gas and coal combination ranges, other gas appliances. Eastern or southern territories or both. Representation, drawing against commission. Other territories entertained. 1422.

**Sales Executive**, 36, college graduate with outstanding sales management record with gas utility company and management organization. Experience in training and supervising salesmen; planning and executing successful sales programs and handling large sales negotiations. Now employed. Will consider position of sales management responsibilities with gas operating utility or gas equipment manufacturer. 1423.

**Chemist and Chemical Engineer**, twenty years' experience in coke oven, water, producer, and natural gas; also in operation of coke, water gas, and producer plants, as chief chemist of large plant, or in chemical research. Have produced elsewhere, and can produce for you. 1424.

### POSITIONS OPEN

Wanted: **Factory representative** for internationally known gas appliance, preferably one who calls on utilities, architects, builders, etc. Choice territories available. 0362.

Opening for an **experienced meter prover** man between the ages of twenty-five and forty for steady employment at Miami Beach, Florida, meter shop. State experience, names and addresses of past employers and salary expected. 0363.

Wanted: **Good appliance salesman** to sell gas ranges, storage water heaters and gas refrigerators. State age, experience, references and other details. 0364.

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